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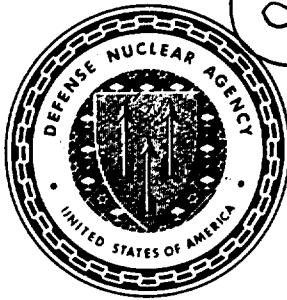
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## Basic State Party Functions and Skills Under CWC

Marie E. Danco, et al.  
BDM International, Inc.  
7915 Jones Branch Drive  
McLean, VA 22102-3396

September 1992



Technical Report

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This document identifies a list of Chemical Weapons Convention (CWC) State Party functions cited in the order in which they appear in Conference on Disarmament document CD/1116. The term "function" as used here means the fulfillment of explicit obligations under the CWC, or any actions implicit in their fulfillment. The text describes the functional categories in which the functions have been placed and describes the operational capabilities assigned to carry out these functions. Capability is defined as "having the ability or capacity; qualified." In the Appendix CD/1116 is quoted with the functions themselves highlighted in bold type. Then a shortened version of each function is given. A functional category identifies each function, and the analysis suggests the operational capabilities required to perform it. A table is included which lists the shortened form of the functions, by category, and cross-references them by page number in the Appendix.			
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## PREFACE

The analysis summarized in this paper was performed by BDM International, Inc. (BDM) during the period July 15, 1991 through March 19, 1992. This report covers work performed under Technical Instruction (TI) No. FY91-07, "Requirement for the U.S. National Authority."

Mr. Jerry Stockton is the Program Manager and Mr. Douglas Beatty is the Principle Investigator for this contract. Ms. Marie Danco is the Technical Instruction Manager. Research and analyses were conducted by James Curren, Marie Danco, Kathryn Findley, Michael McHugh, Ellis Mishulovich, Anne Poulin, and Larry Summers. This staff co-authored the report. The analytical effort was technically supported and monitored by Mr. Jonathan Fox, DNA/OPAC.

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## SECTION 1

### INTRODUCTION

The Draft Chemical Weapons Convention (CD/1116) currently under negotiation in Geneva creates an arms control régime unprecedented in scope, complexity, and pervasiveness. In scope it encompasses all aspects of chemical weapons including their storage, production, precursors, and destruction. The CWC is complex in terms of its multinational character, with the creation of an international organization for its execution, its reporting requirements, and its on-site inspection régimes. The Convention's pervasiveness is magnified by the unprecedented scope and detail of reporting and inspection demands placed upon the commercial chemical and pharmaceutical industries.

All CWC State Party functions in CD/1116 were identified and cited in the order in which they appear. The term "function" as used here means the fulfillment of explicit obligations under the CWC, or any actions implicit in their fulfillment. These functions are two types: *Stated* and *Implied*. Stated functions are expressly called for in the Convention. Implied functions are those not explicitly stated in the Convention but which can either be derived logically from stated functions, or which are suggested in other U.S. documents or those from other States Parties. All functions were then categorized and the requisite organizational capabilities identified. Implied functions are listed relative to their associated stated functions. Implied functions may apply elsewhere in the list, but are only addressed once. In the Appendix, the CD/1116 is quoted with the functions themselves highlighted in bold type. Then a shortened version of each function is given. A functional category identifies each function, according to category descriptions presented in Section 2. The operational capability required to perform each function has been listed; capability is defined as "having the ability or capacity; qualified."

## **SECTION 2**

### **FUNCTIONAL CATEGORIES**

After an exhaustive list of functions was clearly identified and fully described, and in order to assist in the analysis and discussion, similar functions were grouped and a category was assigned to each grouping. The outline of the State Party functional categories follows:

- I. Establishing Functions**
  - A. Initial Declarations**
    - 1. Compilation
    - 2. Reporting
  - B. Legislative**
  - C. Facility Agreements**
  
- II. Operating Functions**
  - A. Policy**
  - B. Inspection Support**
    - 1. General
    - 2. Escort
    - 3. Monitoring Support
  - C. Chemical Operations**
    - 1. Destruction
    - 2. Single Small-Scale Facility (SSSF)
    - 3. Technical Support
  - D. Reporting and Communications**
    - 1. Compilation
    - 2. Reporting
    - 3. Other Communications
  - E. Enforcement/Judicial**
  - F. Security**

#### **2.1 ESTABLISHING FUNCTIONS.**

Establishing Functions are preparatory State Party functions which lay the groundwork for treaty implementation and which are required before routine CWC operations can begin. These preparatory functions have been further subdivided into the following headings.

##### **2.1.1 Initial Declarations.**

The Convention requires initial declarations on the production and stockpiles of chemicals in Schedules 1, 2, and 3; chemical weapons; and chemical weapons production facilities. Since no government organizations presently collect all the data required under

the CWC, a new reporting régime will most likely be required. Because of the large number of chemicals in the Schedules, the large numbers of facilities which produce or are capable of producing these chemicals, and the detail of the information required, these requirements present a formidable challenge. Collecting and processing data calls for a vast data management effort requiring a large and trained staff. After compilation, data must be reported to the Technical Secretariat.

#### **2.1.2 Legislative.**

CD/1116, Article VII states that "Each State Party shall, in accordance with its constitutional processes, adopt all necessary measures to implement its obligations...." Since the CWC will require a regulatory régime for commercial facilities, it is not a self-executing treaty and will require implementing legislation as well as ratification by the Senate to fully enter into force in the United States. As required by the Convention, the legislative package should also include penal legislation for violations of the prohibitions enumerated in the CWC.

#### **2.1.3 Facility Agreements.**

As part of the CWC compliance régime, facility agreements are required to assist industry and government in establishing the rules for inspections of individual facilities. For commercial facilities, such agreements are necessary in order to facilitate verification through routine on-site inspections of inventories of commercial facilities which produce, process, or consume Schedule 1 and 2 chemicals, or create Schedule 1 chemicals in captive use. For government-owned facilities, the agreements are necessary in order to conduct on-site inspections and to monitor chemical weapons storage, production, and destruction facilities, and, if necessary, the Single Small-Scale Facility (SSSF).

### **2.2 OPERATING FUNCTIONS.**

The second major category of State Party Functions is Operating Functions. This group includes all continuing and incidental functions necessary to fulfill all aspects of the obligations under the CWC once the Convention enters into force.

### **2.2.1 Policy.**

After the CWC enters into force, the Conference of the States Parties will continue to meet regularly and in amendment conferences to consider amendments to the Convention. States Parties must analyze the implications and make recommendations whether or not to accept the amendments. Policy decisions will affect cooperation with other States Parties regarding CWC implementation, clarifications of disputes between other States Parties, and responding to recommendations for collective action among States Parties to redress damage to CWC objectives and purposes.

### **2.2.2 Inspection Support.**

Inspection support includes the submission of chemical production facilities to inspection and the provision of a wide range of logistical services to assist the inspection process. Personnel performing these functions will escort the international inspectors, review the inspection report, and inspect/test the inspection equipment. Aside from the logistical aspects of this category, the responsible organization should also ensure that inspections are carried out in accordance with respective facility agreements.

### **2.2.3 Chemical Operations.**

Perhaps the single most important functional class, chemical operations encompasses chemical agent and destruction. This comprises the core of the CWC's technical provisions regarding chemical facilities and chemical weapons. The bulk of these functions fall into the destruction category, and include all operations related to the destruction of chemical weapons stockpiles including removal and transport of weapons stocks, closure and destruction of production facilities, and environmental safety. Should there be a SSSF, the State Party functions relating to it would be under Chemical Operations. The CWC also requires States Parties to mutually assist and advise each other regarding chemical weapons use; these fall under this category as well.

#### **2.2.4 Reporting and Communications.**

Reporting and communications functions have been divided into three types: compilation, reporting, and other communications. During the first ten years after EIF, data must be collected and compiled on destruction information. Over the life of the Convention, data will be collected and compiled on activity regarding Schedule 1, 2, and 3 chemicals. As with the initial declarations, regular reporting will require the updating and manipulation of a very large and complex database, particularly for Schedule 2 and 3 chemicals. A structure will need to be in place to numerically track these chemicals. Other communications include liaison functions required for *ad hoc* communications or miscellaneous communications with the Organization or other States Parties not related to inspections. Such communications may include those regarding differences in destruction plans, clarifications on compliance issues, information on possible assistance to the Organization, consultation on chemical weapons destruction, and information on treaty implementation.

#### **2.2.5 Enforcement/Judicial.**

The United States has an obligation to ensure that the CWC prohibitions and U.S. legislation are closely followed within its territory. The responsibility to enforce the provisions of the CWC and its implementing legislation fall within the Executive branch. For a detailed explanation of the legal aspects of enforcing the CWC, see the BDM report, "Harmonizing the Chemical Weapons Convention with the United States Constitution."

#### **2.2.6 Security.**

Because of the intrusiveness and scope of the CWC's inspection régime, sensitive government and commercial information not related to chemical weapons could be compromised. To ensure that such information or equipment is not jeopardized, facility managers must be consulted and/or advised on conducting managed access inspections and protecting sensitive materials. Lists of proposed inspectors must be reviewed for security risks, credentials of foreign inspectors must be certified, and other advisory, certification, investigative, counterintelligence, and information storage functions are required to ensure that breaches of national security or company-sensitive information do not take place.

## SECTION 3

### OPERATIONAL CAPABILITIES

Operational capabilities are self-explanatory in many, though not all, cases. The following three definitions are of first importance in the capabilities assigned:

**Legislative Authority** - The Constitutionally derived power of Congress to make laws.

**Regulatory Authority** - The power derived from specific legislation to make rules in order to enforce the legislation.

**Executive Authority** - Power derived from the Constitution, legislation, or Presidential directive to direct subordinate elements within the Executive Branch toward a policy goal.

The following are intended to more clearly define several other operational capabilities.

- **Access** means that information, entity, or equipment is available close to hand, such as access to instant photography equipment, to telecommunications, or to National Authority organizations.
- **Authorized access** involves permission to have the information or to physically enter a facility, such as authorized access to CW and related facilities.
- **Chemical Weapons Convention expertise** refers to intimate familiarity with the treaty itself and all its nuances.
- **Diplomatic expertise** means experience in international relations and work with other diplomats in the international environment.
- **Knowledge of equipment**, in this context, means familiarity with inspection and related monitoring equipment.

- **Specific knowledge of facility** refers to familiarity with the particular government or commercial facility being inspected, its physical plant, and its environs.
- **Visa authority** refers to the ability to issue visas to individuals intending to visit the U.S.

Due to the nature of the BDA and its CW destruction provisions, the list of State Party CWC functions is cross-referenced with the June 1990 U.S.-Soviet Bilateral Destruction Agreement text. Those functions required, in principle, in both of these treaties are marked by double asterisk (\*\*). Currently, there are few similar stated functions present in the CWC and the BDA, because the BDA Inspection Protocol is incomplete and unavailable for comparison.

The following Table lists the shortened version of State Party functions from the Appendix, according to the categories described above. In addition to CD/1116, the primary documents analyzed were: Working Paper: Recommended Text for Article IX. Challenge Inspection, contributed by Australia, Japan, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, July 15, 1991; BDM report entitled Options for Federal Legislation to Implement Routine and Challenge Inspections Under the Draft Chemical Weapons Conventions; and the Stockholm International Peace Research Institute (SIPRI) Chemical and Biological Warfare Series, Number 11.

Table 1. Categories of CWC State Party functions.

This table presents the functions listed by category. It also indicates the page number on which each function may be found in the Appendix.

*# Cited elsewhere in list*

*\*\*Also required in the BDA*

Page	CWC State Party Functions by Category
37	Appoint a National Authority Serve as national focal point for all CWC matters
37	I. Establishing Functions
19	A. Initial Declarations
19 19 19 26 26 32 76 82	1. Compilation <ul style="list-style-type: none"> <li>a. Collect and compile CW inventory</li> <li>b. Collect and compile inventory of CW transfers and/or receipts</li> <li>c. Establish CW database</li> <li>d. Collect and compile inventory of CWPFs</li> <li>e. Collect and compile record of transfer and/or receipt of CWP equipment</li> <li>f. Establish database for information on chemicals and facilities</li> <li>g. Collect and compile data on Schedule 2 chemicals and production facilities</li> <li>h. Collect and compile data on Schedule 3 chemicals and production facilities</li> </ul>
18	2. Reporting <ul style="list-style-type: none"> <li>a. Declare possession of CWs</li> <li>b. Declare transfer or receipt of CWs or CW production equipment</li> <li>c. Declare existence of others' CWs within territory</li> <li>d. Declare possession of CWPFs</li> <li>e. Declare possession of CW R&amp;D facilities</li> <li>f. Declare CW specifics</li> <li>g. Transmit data</li> <li>**h. Provide general plan for CW destruction</li> <li>**i. Provide detailed CW destruction plan</li> <li>j. Submit specific data on CWPFs and equipment</li> <li>k. Submit general plan for CWPF closure, destruction, and/or conversion</li> <li>l. Submit CWPF detailed destruction plans</li> <li>m. Declare specific data regarding Schedule 1, 2, and 3 chemicals and facilities</li> <li>n. Submit facility conversion plan for CWPFs used for CW destruction</li> <li>o. Provide information on SSSF to the Organization</li> <li>p. Declare initially aggregate activity for Schedule 2 chemicals</li> <li>q. Declare initially activity for individual Schedule 2 chemicals and facilities</li> <li>r. Declare initially aggregate activity for Schedule 3 chemicals</li> <li>s. Provide initial declaration of activity for individual Schedule 3 chemicals and facilities</li> </ul>

Table 1. Categories of CWC State Party functions (Continued).

Page	CWC State Party Functions by Category
35	B. Legislative
35	1. Draft CWC implementing and penal legislation
30	2. Adopt CWC implementing and penal legislation
31	3. Implement relevant legislation/regulations (no chemical activity)
35	4. Implement relevant legislation/regulations (facility controls)
43	5. Assist other States Parties to legally implement CWC
46	6. Undertake to withdraw discriminatory restrictions in chemical field applied to States Parties
31	7. Ratify (reject) amendments to Convention
33	8. Subject Schedule 1, 2, and 3 chemicals/related facilities to monitoring
33	9. Subject Schedule 2 chemicals and facilities to on-site verification/monitoring
31	10. Subject Schedule 3 chemicals and facilities to data reporting
31	11. Submit Schedule 1, 2, and 3 chemical facilities to controls
58	C. Facility Agreements
60	1. Conclude facility agreements for CW storage facilities
64	2. Conclude subsidiary arrangements for verification at destruction sites
65	3. Consult with Organization on CWPF destruction verification plan
71	4. Establish subsidiary arrangement for monitoring CWPF destruction
74	5. Conclude agreement covering inspection procedures for the SSSF
79	6. Conclude agreements covering verification for Schedule 1 chemical production facilities outside the SSSF
94	7. Execute facility agreements for Schedule 2 chemical facilities
94	8. Conclude facility agreements with the Organization
38	II. Operating Functions
39	A. Policy
42	#1. Cooperate with States Parties for CWC implementation
42	**2. Cooperate in clarification of disputes and ambiguities
44	#3. Contribute to voluntary fund to assist victim States of CW use
44	#4. Conclude agreements with States Parties to aid in cases of CW use
44	#5. Respond to recommendation for collective action among States Parties to redress serious damage to objectives and CWC purposes
44	**6. Propose Amendments to the Convention
45	7. Participate in Amendment Conference
48	8. Object (not object) to amendment
49	9. Consult with other States Parties to resolve disputes
23	B. Inspection Support
24	1. General
27	**a. Provide access for verification of CW destruction
70	**b. Provide access to CW storage and destruction facilities for on-site verification
78	c. Provide access for on-site verification of CWPF declarations
73	d. Submit SSSF to verification
83	e. Submit Schedule 2 chemical facilities to verification
84	f. Submit Schedule 1 chemical production facilities outside the SSSF to verification
	g. Provide visas for inspectors
	h. Designate points of entry

Table 1. Categories of CWC State Party functions (Continued).

Page	CWC State Party Functions by Category
84	i. Facilitate & provide support for inspections of all designated facilities
85	j. Inform TS of aircraft diplomatic clearance number
85	k. Ensure filed flight plan is approved
86	l. Make arrangements to receive and service inspector aircraft
86	m. Provide amenities, services to inspectors on routine inspections
87	n. Inspect inspection equipment at Point of Entry
87	o. Exclude (not exclude) inspection equipment
88	p. Notify facility of inspection
89	q. Brief inspection team
90	r. Provide access to telecommunications
90	s. Furnish requested data and answer inspectors' questions
91	t. Provide instant photographic services
91	u. Request copies of information gathered during inspection
92	v. Take samples and assist in their on-site analysis
92	w. Provide sampling and analysis equipment per facility agreement
92	x. Countersign inspection findings document
93	y. Annex comments to final findings document
93	z. Inspect and test inspection instruments at site
93	aa. Assist in the installation of continuous monitoring equipment
93	ab. Provide map with precise boundaries of inspection site
97	ac. Negotiate alternative site perimeter if necessary
99	ad. Assist inspection team in verifying site location
99	ae. Identify exit points and evidence of vehicular exit activity from inspection site perimeter
100	af. Provide safety and logistical briefing to inspection team
100	ag. Conduct pre-inspection briefing
101	ah. Negotiate inspection team activities
102	ai. Satisfy compliance concerns regarding areas, structures, containers, or vehicles to which access has been denied or restricted
104	aj. Satisfy compliance concerns regarding areas or structures to which access has been denied or restricted
105	ak. Provide amenities and services for inspectors during challenge inspections in U.S.
105	al. Reimburse cost of U.S. observers on challenge inspections in other countries
106	am. Respond to inspection team request to visit locations outside boundary of inspection site
107	an. Assist in collection of samples during inspections associated with alleged use
106	ao. Reimburse Technical Secretariat for cost of inspection team clothing and equipment
107	ap. Provide access to medical histories and hospitals in situations of alleged use
20	2. Escort
27, 30	**a. Provide access for verification of CW declarations
34	**b. Provide access to CWPFs for on-site verification/monitoring
39	c. Grant inspectors access to Schedule 1 and 2 chemical facilities
39	d. Prepare for and transport inspectors to inspection site
39	e. Provide samples as requested by inspectors

Table 1. Categories of CWC State Party functions (Continued).

Page	CWC State Party Functions by Category
88	f. Ensure immediate entry and safe conduct of inspection team
89	g. Ensure timely/safe conduct of inspection team and supplies to the inspection site
91	h. Accompany inspection team at all times
97	i. Transport inspection team to final perimeter of inspection site
98	j. Transport inspection team to alternative perimeter
98	k. Provide prompt access to alternative perimeter
101	l. Provide inspection team access within requested perimeter
105	m. Liaise with Technical Secretariat to coordinate observers' arrival
55	<b>3. Monitoring Support</b>
56	a. Ensure chemical weapons are configured to accept seals and monitoring devices
58	b. Subject maintenance activities to monitoring
59	c. Ensure timely verification by TS of declarations and implementation of monitoring
94	d. Monitor installations of continuous monitoring instruments, systems and seals
96	e. Monitor facilities for extraordinary events which may impact monitoring system
104	f. Approve tamper-evident sensor suites as necessary
20	<b>C. Chemical Operations</b>
21	<b>1. Destruction</b>
22	a. Draft detailed destruction plan
23	b. Establish CW destruction information office
23, 36	**c. Destroy CWs
24	d. Assign human safety and environmental protection highest priority in CWC implementation
25	e. Apply national safety and emission standards to CW handling
25	f. Secure and destroy CWs found subsequent to initial declaration
25	g. Ensure removal from U.S. territory of all weapons of states not party to the Convention
25	h. Ensure CW activity ceases at CWPFs
25	i. Ensure that no construction/modifications of CWPFs take place
26	j. Develop general plan for CWPF closure, destruction, and/or conversion
27	k. Close CWPFs
27	l. Render CWPFs inoperable
28	m. Destroy CWPFs
29	n. Assign human safety and environmental protection highest priority during CWPF destruction
29	o. Apply national safety and emission standards to CWPFs
29	p. Convert CWPFs to destruction facilities
29	q. Destroy converted CWPFs used for destruction
30	r. Secure storage facilities
30	s. Prevent CW movement except for removal for destruction
30	t. Construct and operate destruction facilities to ensure verification
30	u. Develop verifiable operating procedures for destruction facilities
30	v. Carry out conversion under international verification
30	w. Ensure nonviability of converted destruction facilities to CWPFs

Table 1. Categories of CWC State Party functions (Continued).

Page	CWC State Party Functions by Category

Table 1. Categories of CWC State party functions (Continued).

Page	CWC State Party Functions by Category
61	1. Declare destruction of designated quantity of chemical weapons
61	m. Report inability to fulfill obligations to destroy CWPs
62	n. Submit annual plans (facility conversion plan)
65	o. Notify TS of Schedule 1 chemical transfers to other State Party
66	p. Make detailed annual declarations of Schedule 1 chemical transfers
69	q. Give advance notice of changes to the SSSF
70	r. Declare annually activity at the SSSF
72	s. Provide information on production facilities outside the SSSF
72	t. Give advance notice of changes to Schedule 1 chemical production facilities outside the SSSF
73	u. Declare annually activity at Schedule 1 chemical production facilities outside the SSSF
76	v. Report annually aggregate activity for Schedule 2 chemicals
76	w. Report annually activity for individual Schedule 2 chemicals and facilities
77	x. Give advance notification of anticipated Schedule 2 chemical activity
78	y. Receive advance notification for inspection of Schedule 2 chemical facility
81	z. Report annually aggregate activity for Schedule 3 chemicals
81	aa. Report annually activity for individual Schedule 3 chemicals and facilities
82	ab. Give advance notification of anticipated Schedule 3 chemical activity
82	ac. Acknowledge receipt of list of inspectors
83	ad. Notify TS of acceptance or nonacceptance of inspectors
88	ae. Acknowledge receipt of notification of inspection
96	af. Notify Technical Secretariat if extraordinary event requires opening seals or removal or modification of monitoring device
21	3. Other Communications
36	**a. Cooperate with other States Parties on CW destruction information
38	b. Inform Organization of implementation measures
40	c. Cooperate with and assist the Organization
40	d. Provide clarification on ambiguities to the Executive Council
41	e. Request clarification from Executive Council on situations other States Parties considered ambiguous
41	f. Facilitate information exchange on protection against CW
41	g. Request information from the Organization on protective measures
41	h. Provide information to the Organization on protective measures
48	i. Provide additional information for use in evaluating simplified amendments
49	j. Inform the Executive Council of actions taken to resolve disputes
50	k. Receive information concerning revision of chemical schedules and guidelines
50	l. Provide information to the Organization concerning potential need for amendments to the chemical schedules and guidelines
59	m. Receive request for inspection (storage facility)
57	n. Consult with the Organization on CW destruction verification plan
20	E. Enforcement/Judicial
30	1. Ensure that CWs are not moved
34	2. Ensure that no chemical activity prohibited by the Convention occurs
	3. File affidavits to obtain administrative warrants for inspections

Table 1. Categories of CWC State Party functions (Continued).

Page	CWC State Party Functions by Category
34	4. Conduct <i>ad hoc</i> internal U.S. inspections
34	5. Issue administrative subpoenas
34	6. Adjudicate claims of damage
34	7. Levy and adjudicate fines and penalties
68	8. Approve all facilities outside the SSSF for production of Schedule 1 chemicals
	<b>F. Security</b>
37	1. Protect confidential information in accordance with Annex on Protection of Confidential Information
37	2. Develop procedures for compartmentalization and protection of Confidential Business Information in the U.S.
51	3. Develop agreements with the Organization regarding confidential information
52	4. Identify confidential information
52	5. Identify information for release
53	6. Provide for proper handling of information classified confidential under the Convention
53	7. Provide accountability for handling of confidential information
54	8. Cooperate with investigations concerning improper handling of information classified under the Convention
54	9. Take appropriate action in cases of breaches of security
54	10. Respond to requirements of the "Commission for the settlement of disputes related to confidentiality"
83	11. Evaluate list of nominated inspectors
103	12. Take measures to protect sensitive or confidential installations and data and satisfy inspectors as to the legitimacy of measures taken
103	13. Provide consultation to facilities' management regarding protection of sensitive equipment, installations, data

## **SECTION 4**

### **CONCLUSIONS**

The task of implementing the Chemical Weapons Convention is a large one, and one that will require detailed preparation well ahead of Entry Into Force. Close scrutiny of the Establishing Functions in the Table above reveals those functions which must be accomplished between signature and EIF, as well as those which must be accomplished immediately after EIF. Should the Convention be signed in 1992, the United States will have to begin planning for implementation immediately. This document identifies a list of the State Party functions which will be required of the U.S., over the life of the Convention, according to CD/1116. These treaty activities and those required by the Preparatory Commission involve planning, cooperation, and effective decision-making for their timely execution.



**APPENDIX**  
**BASIC STATE PARTY FUNCTIONS AND SKILLS UNDER CWC**

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Cited Treaty Text

Article III  
DECLARATIONS  
Page 19-20

1. *Each State Party shall submit to the Organization, not later than 30 days after the Convention enters into force for it, the following declarations:*

(a) **Chemical Weapons 3/ 4/**

(i) *Whether it owns or possesses any chemical weapons, or whether there are any chemical weapons located in any place under its jurisdiction or control;*

(ii) *Whether it has on its territory any chemical weapons located in any place under the jurisdiction or control of other States or that are under the ownership or possession of other States;*

(iii) *Whether it has transferred or received, directly or indirectly, any chemical weapons since 1 January 1946.*

(b) **Chemical Weapons Production Facilities**

(i) *Whether it has or has had any chemical weapons production facilities under its ownership or possession, or located in any place under its jurisdiction or control, at any time since 1 January 1946;*

(ii) *Whether it has or has had on its territory any chemical weapons production facilities located in any place under the jurisdiction or control of other States or that are or were under the ownership or possession of other States, at any time since 1 January 1946;*

(iii) *Whether it has transferred or received, directly or indirectly, any equipment for the production of chemical weapons [and documentation relevant to the production of chemical weapons] since 1 January 1946.*

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**3/** *It was proposed that States Parties should declare whether they have discovered any chemical weapons abandoned, stockpiled or otherwise left by other States Parties on their territories without their consent or knowledge; and whether they have abandoned, stockpiled or otherwise left chemical weapons on the territories of other States during and/or since World War II.*

**4/** *The question of old chemical weapons was subject to consultations during the 1990 and 1991 sessions. The outcome of these consultations can be found in Appendix II.*

(c) Other declarations

*The precise location, nature and general scope of activities of any facility and establishment 1 under its ownership or possession, or located in any place under its jurisdiction or control, designed, constructed or used since (1 January 1946) for development of chemical weapons, inter alia, laboratories and test and evaluation sites.*

*1/ The scope of the phrase "any facility and establishment" is to be clarified and an appropriate formulation found.*

<b>Stated Function:</b>	Declare possession of CWs.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	Declare transfer or receipt of CWs or CW production equipment.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	Declare existence of others' CWs within territory.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	Declare possession of CWPFs.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	Declare possession of CW R&D facilities.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information

2. *Each State Party, not later than 30 days after the Convention enters into force for it, shall submit a declaration in which it shall:*

- (a) *Specify the precise location, aggregate quantity and detailed inventory of the chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control;*
- (b) *Report any chemical weapons on its territory that are located in any place under the jurisdiction or control of other States;*
- (c) *Specify any direct or indirect transfer or receipt by the State Party of any chemical weapons since 1 January 1946, and*
- (d) *Provide its general plan for destruction of chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control.*

<b>Stated Function:</b>	Declare CW specifics.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	**Provide general plan for CW destruction.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction
<b>Implied Function:</b>	Collect and compile CW inventory.
<b>Functional Category:</b>	Initial Declarations - Compilation
<b>Organizational Capabilities:</b>	Authorized access to CW and related facilities
<b>Implied Function:</b>	Collect and compile inventory of CW transfers and/or receipts.
<b>Functional Category:</b>	Initial Declarations - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Implied Function:</b>	Establish CW database.
<b>Functional Category:</b>	Initial Declarations - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Implied Function:</b>	Database management
<b>Implied Function:</b>	Maintain CW database.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Implied Function:</b>	Database management
<b>Implied Function:</b>	Transmit data.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Operating Functions - Reporting
	Secure international communications capability

3. *Each State Party shall, immediately after the declaration under paragraph 2 of this Article has been submitted, provide access to the chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, for the purpose of systematic international on-site verification of the declaration through on-site inspection. Thereafter, each State Party shall ensure, through access to the chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, for the purpose of systematic international on-site verification and through on-site inspection and continuous monitoring with on-site instruments, that the chemical weapons are not removed except to a chemical weapons destruction facility.*

<b>Stated Function:</b>	**Provide access for verification of CW declarations.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Authorized access to CW storage facilities Inspection support expertise
<b>Stated Function:</b>	Ensure that CWs are not moved.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Authorized access to CW and CW storage facilities

4. *Each State Party shall submit detailed plans for the destruction of chemical weapons not later than 180 days before each annual destruction period begins. The detailed plans shall encompass all stocks to be destroyed during the next annual period, and shall include the precise location and the detailed composition of the chemical weapons which are subject to destruction during that period.*

<b>Stated Function:</b>	**Provide detailed CW destruction plan.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction
<b>Implied Function:</b>	Draft detailed destruction plan.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction

5. *Each State Party undertakes to cooperate with other States Parties that request information or assistance on a bilateral basis or through the Technical Secretariat regarding methods and technologies for the safe and efficient destruction of chemical weapons.*

<b>Stated Function:</b>	**Cooperate with other States Parties on CW destruction information.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to International Organization Experience with CW transportation, sampling, storage, and destruction
<b>Implied Function:</b>	Establish CW destruction information office.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Access to International Organization Experience with CW transportation, sampling, storage, and destruction

6. *Each State Party shall:*

(a) *Destroy any [/] chemical weapons it owns or possesses or that are located in any place under its jurisdiction or control, pursuant to the order of destruction specified in the Annex to Article IV, beginning not later than one year after the Convention enters into force for it, and finishing not later than 10 years after the Convention enters into force; however, a State Party is not precluded from destroying them at a faster pace;*

(b) *Provide information annually regarding the implementation of its plans for destruction of chemical weapons; and*

(c) *Certify, not later than 30 days after the destruction process has been completed, that any chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, have been destroyed.*

*[/] The issue concerning the destruction of the chemical weapons abandoned, stockpiled or otherwise left over on the territory of a State Party by another State Party or State, without the consent or knowledge of the former, needs to be considered and resolved.*

<b>Stated Function:</b>	**Destroy CWs.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction
<b>Stated Function:</b>	**Report annually on CW destruction.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	Certify completion of CW destruction.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Implied Function:</b>	Annually collect and compile destruction data.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management

7. *Each State Party, during its transportation, sampling, storage, and destruction of any chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State party shall transport, sample, store and destroy such chemical weapons in accordance with national standards for safety and emissions.*

<b>Stated Function:</b>	Assign human safety and environmental protection highest priority during CW destruction.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction
 <b>Stated Function:</b>	 Apply national safety and emission standards to CW handling.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction Knowledge of environmental safety standards and practices

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8. *Each State Party shall provide access to any chemical weapons destruction facilities and the facilities' storage it owns or possesses, or that are located in any place under its jurisdiction or control, for the purpose of systematic international on-site verification of destruction through the continuous presence of inspectors and continuous monitoring with on-site instruments, in accordance with the Annex to Article IV.*

<b>Stated Function:</b>	**Provide access for verification of CW destruction.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Authorized access to CW storage/destruction facilities Inspection support expertise

**9.** Any chemical weapons discovered by a State Party after the initial declaration of chemical weapons shall be reported, secured and destroyed, as provided in the Annex to Article IV. 2/ 3/

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**2/** Consultations were carried out on this issue. The results are reflected in CD/CW/WP.177/Rev.1. Different views were expressed, *inter alia*, on the question of the responsibility for the destruction of these weapons. Further work is needed.

**3/** For some delegations, the question of the applicability of this Annex to obsolete chemical weapons (ordnances) retrieved from the combat zones of World War I will have to be resolved later.

<b>Stated Function:</b>	Report any CWs found subsequent to initial declaration.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Access to International Organization Authorized access to pertinent information
 <b>Stated Function:</b>	Secure and destroy CWs found subsequent to initial declaration.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction.

**10.** All locations where chemical weapons are stored or destroyed shall be subject to systematic international on-site verification, through on-site inspection and monitoring with on-site instruments in accordance with the Annex to Article IV.

<b>Stated Function:</b>	Provide access to CW storage and destruction facilities for on-site verification.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Authorized access to CW storage/destruction facilities Inspection support expertise

11. Any State Party which has on its territory chemical weapons located in any place under the jurisdiction or control, or under the ownership or possession of a State not Party to this Convention, shall ensure that such weapons are removed from its territory not later than 30 days after the Convention enters into force for it.

Stated Function:	Ensure removal from U.S. territory of all weapons of states not party to the Convention.
Functional Category:	Destruction
Organizational Capabilities:	Authorized access to CW and related facilities

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2. Each State Party with any chemical weapons production facility shall cease immediately all activity at any chemical weapons production facility it owns or possesses or, that is located in any place under its jurisdiction or control, except that required for closure.

Stated Function:	Ensure CW activity ceases at CWPFs.
Functional Category:	Destruction
Organizational Capabilities:	Authorized access to CW and related facilities

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3. No State Party shall construct any new chemical weapons production facility or modify any existing facility for the purpose of chemical weapons production or for any other purpose prohibited under the Convention.

Stated Function:	Ensure that no construction or modifications of CWPFs take place.
Functional Category:	Destruction
Organizational Capabilities:	Responsibility for CWPF destruction

4. Each State Party, not later than 30 days after the Convention enters into force for it, shall submit a declaration in which it shall:

(a) Specify any chemical weapons production facilities it has owned or possessed, or that have been located in any place under its jurisdiction or control, at any time since 1 January 1946.

(b) Specify any chemical weapons production facilities that have been located on its territory in any place under the jurisdiction or control of other States, at any time since 1 January 1946;

(c) Specify any transfer or any receipt, directly or indirectly, of any equipment for the production of chemical weapons (and documentation relevant to the production of chemical weapons) since 1 January 1946;

(d) Specify actions to be taken for closure of any chemical weapons production facility it owns or possesses, or that are located in any place under its jurisdiction or control;

(e) Provide its general plan for destruction for any chemical weapons production facility it owns or possesses, or that are located in any place under its jurisdiction or control;

(f) Provide its general plan for any temporary conversion of any chemical weapons production facility into a chemical weapons destruction facility.

Stated Function:	Submit specific data on CWPFs and equipment.
Functional Category:	Initial Declarations - Reporting
Organizational Capabilities:	Authorized access to pertinent information
Stated Function:	Submit general plan for CWPF closure, destruction, and/or conversion.
Functional Category:	Initial Declarations - Reporting
Organizational Capabilities:	Experience with CWPF closure, destruction, or conversion
Implied Function:	Collect and compile inventory of CWPFs.
Functional Category:	Initial Declarations - Compilation
Organizational Capabilities:	Authorized access to pertinent information Database management
Implied Function:	Develop general plan for CWPF closure, destruction, and/or conversion.
Functional Category:	Destruction
Organizational Capabilities:	Responsibility for CWPF destruction
Implied Function:	Collect and compile record of transfer and/or receipt of CWP equipment.
Functional Category:	Initial Declarations - Compilation
Organizational Capabilities:	Authorized access to pertinent information Database management

5. *Each State Party shall, immediately after the declaration under paragraph 4 has been submitted, provide access to any chemical weapons production facility it owns or possesses, or that are located in any place under its jurisdiction or control, for the purpose of systematic international on-site verification of the declaration through on-site inspection.*

<b>Stated Function:</b>	Provide access for on-site verification of CWPF declarations.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Authorized access to CW and related facilities Inspection support expertise

6. *Each State Party shall:*

(a) *Close not later than 90 days after the Convention enters into force for it, any chemical weapons production facility it owns or possesses or that are located in any place under its jurisdiction or control in a manner that will render each facility inoperable and give notice thereof; and*

(b) *Provide access to any chemical weapons production facility it owns or possesses, or that are located in any place under its jurisdiction or control, subsequent to closure, for the purpose of systematic international on-site verification through periodic on-site inspection and continuous monitoring with on-site instruments in order to ensure that the facility remains closed and is subsequently destroyed.*

<b>Stated Function:</b>	Close CWPFs.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Responsibility for CWPF destruction
<b>Stated Function:</b>	Report closure of CWPFs.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Stated Function:</b>	**Provide access to CWPFs for on-site verification/monitoring.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Authorized access to CWPF Inspection support expertise
<b>Implied Function:</b>	Render CWPFs inoperable.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Responsibility for CWPF

7. *Each State Party shall submit detailed plans for destruction of any chemical weapons production facility it owns or possesses, or that are located in any place under its jurisdiction or control, not later than 180 days before the destruction of the facility begins.*

<b>Stated Function:</b>	Submit CWPF detailed destruction plans.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information

8. *Each State Party shall:*

(a) *Destroy any chemical weapons production facilities it owns or possesses, or that are located in any place under its jurisdiction or control, and related facilities and equipment as specified in Section III-A of the Annex to Article V, in accordance with the order of destruction specified in that Annex, beginning not later than one year after the Convention enters into force for it, and finishing not later than 10 years after the Convention enters into force; however, a State Party is not precluded from destroying them at a faster pace;*

(b) *Provide information annually regarding the implementation of its plans for the destruction of the chemical weapons production facilities it owns or possesses or that are located in any place under its jurisdiction or control;*

(c) *Certify, not later than 30 days after the destruction process has been completed, that the chemical weapons production facilities it owns or possesses, or that are located in any place under its jurisdiction or control, have been destroyed.*

<b>Stated Function:</b>	Destroy CWPFs.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Responsibility for CWPF destruction
<b>Stated Function:</b>	Provide annual information on CWPF destruction.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Implied Function:</b>	Annually collect and compile CWPF destruction information.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management

**9. Each State Party, during its destruction of any chemical weapons production facilities it owns or possesses, or that are located in any place under its jurisdiction or control, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall destroy such chemical weapons production facilities in accordance with national standards for safety and emissions.**

<b>Stated Function:</b>	Assign human safety and environmental protection highest priority during CWPF destruction.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CWPF destruction
<b>Stated Function:</b>	Apply national safety and emission standards to CWPF destruction.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Knowledge of national safety and emission standards

**10. A chemical weapons production facility may be temporarily converted for destruction of chemical weapons in accordance with the provisions of the Annex to Article V. Such a converted facility must be destroyed as soon as it is no longer in use for destruction of chemical weapons and, in any case, no later than 10 years after the Convention enters into force.**

<b>Stated Function:</b>	Convert CWPFs to destruction facilities.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CWPF destruction
<b>Stated Function:</b>	Destroy converted CWPFs used for destruction.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Responsibility for CWPF conversion/destruction

11. *Each State Party shall provide access to any chemical weapons production facilities it owns or possesses, or that are located in any place under its jurisdiction or control, for systematic international on-site verification through on-site inspection and monitoring with on-site instruments in accordance with the Annex to Article V.*

<b>Stated Function:</b>	Provide access to CWPFs for on-site verification/monitoring.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Authorized access to CWPF Inspection support expertise

1. *Each State Party:*

(b) *Shall ensure that toxic chemicals and their precursors are not developed, produced, otherwise acquired, retained, transferred, or used within its territory or anywhere under its jurisdiction or control for purposes prohibited under the Convention.*

<b>Stated Function:</b>	Ensure that no chemical activity prohibited by the Convention occurs.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Executive authority, Regulatory authority
<b>Implied Function:</b>	Implement relevant legislation/regulations.
<b>Functional Category:</b>	Legislative
<b>Organizational Capabilities:</b>	Executive authority Legislative authority Regulatory authority

2. *Each State Party shall submit facilities described in paragraph 3 and chemicals listed in Schedules 1, 2A, 2B and 3, that are located within its territory or in any place under its jurisdiction or control, to the provisions in annexes 1, 2 and 3 to this Article.* *51*

*51 It is to be discussed further whether the prohibition contained in paragraph 1, Annex 1 to Article VI, should be extended to the chemicals in Schedules 2 and 3. In this context, a view was expressed that such an extension would pose particular legal problems in the light of the obligations for national implementation under Article VII, paragraph 1 (c). Another view was expressed that if States Parties are allowed to produce, acquire, retain, transfer or use chemicals in Schedules 2 and 3 on the territories of non-States Parties, the extension of the scope of this paragraph needs further consideration.*

**Stated Function:** Submit Schedule 1, 2, and 3 chemical facilities to controls.

**Functional Category:** Legislative

**Organizational Capabilities:** Regulatory authority

**Implied Function:** Implement relevant legislation/regulations.

**Functional Category:** Legislative

**Organizational Capabilities:** Executive authority  
Regulatory authority

3. *Toxic chemicals and their precursors listed in Schedules 1, 2A, 2B and 3 which could be used for purposes prohibited under the Convention, as well as facilities which produce, process or consume these toxic chemicals or precursors, shall be subject to international monitoring as provided in Annexes 1, 2 and 3 to this Article. The Schedules of chemicals may be revised according to Section IV of the Annex on Chemicals.*

**Stated Function:** Subject Schedule 1, 2, and 3 chemicals and related facilities to monitoring.

**Functional Category:** Legislative

**Organizational Capabilities:** Authorized access to Schedule 1,2,3 chemical facilities  
Inspection support expertise

4. Not later than 30 days after the entry into force of the Convention for it, each State Party shall declare data on relevant chemicals and the facilities which produce them, in accordance with Annexes 1, 2 and 3 to this Article.

<b>Stated Function:</b>	Declare specific data regarding Schedule 1, 2, and 3 chemicals and facilities.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
<b>Implied Function:</b>	Establish database for information on chemicals and facilities.
<b>Functional Category:</b>	Initial Declarations - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information. Database management
<b>Implied Function:</b>	Maintain database for information on chemicals and facilities.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information. Database management

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5. Each State Party shall make an annual declaration regarding the relevant chemicals in accordance with Annexes 1, 2 and 3 to this Article.

<b>Stated Function:</b>	Make annual declarations regarding Schedule 1, 2, and 3 chemicals and facilities.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Regulatory authority

7. *Each State Party shall subject chemicals listed in Schedule 2, parts A and B, and facilities declared under Annex 2 to this Article to monitoring by data reporting and systematic international on-site verification, through on-site inspection and use of on-site instruments as long as production and processing are not impaired.*

<b>Stated Function:</b>	Subject Schedule 2 chemicals and facilities to on-site verification/monitoring.
<b>Functional Category:</b>	Legislative
<b>Organizational Capabilities:</b>	Executive authority Inspection support expertise Regulatory authority

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8. *Each State Party shall subject chemicals listed in Schedule 3 and facilities declared under Annex 3 to this Article to monitoring by data reporting.*

<b>Stated Function:</b>	Subject Schedule 3 chemicals and facilities to data reporting.
<b>Functional Category:</b>	Legislative
<b>Organizational Capabilities:</b>	Executive authority Regulatory authority

11. For the purpose of on-site verification, each State Party shall grant to the inspectors access to facilities as required in the Annexes to this Article.

<b>Stated Function:</b>	Grant inspectors access to Schedule 1 and 2 chemical facilities.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Authorized access to Schedule 1 and 2 chemical facilities Regulatory authority Inspection support expertise
<b>Implied Function:</b>	File affidavits to obtain administrative warrants for inspections.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	National and international legal expertise
<b>Implied Function:</b>	Conduct <i>ad hoc</i> internal U.S. inspections independent from Organization in order to ensure compliance and to ensure that the declared facilities qualify as pervasively regulated.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Inspection support expertise
<b>Implied Function:</b>	Issue administrative subpoenas to facilitate the inspection process and verification of declarations.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Legal authority
<b>Implied Function:</b>	Adjudicate claims of damage in conjunction with inspections.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Legal authority
<b>Implied Function:</b>	Levy and adjudicate fines and criminal penalties.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Legal authority

1. *Each State Party shall, in accordance with its constitutional processes, adopt the necessary measures to implement its obligations under this Convention, and, in particular:*

(a) *to prohibit natural and legal persons anywhere on its territory or in other places under its jurisdiction as recognized by international law from undertaking any activity that a State Party to this Convention is prohibited from undertaking by this Convention;*

(b) *not to permit any activity as referred to under (a) in any place under its control; and*

(c) *to enact penal legislation, which shall extend to such activities as referred to under (a) undertaken anywhere by natural persons, possessing its nationality, in conformity with international law.*

**Stated Function:** Adopt CWC implementing and penal legislation.

**Functional Category:** Legislative

**Organizational Capabilities:** Chemical Weapons Convention expertise  
Legislative authority  
National and international legal expertise

**Implied Function:** Draft CWC implementing and penal legislation.

**Functional Category:** Legislative

**Organizational Capabilities:** Chemical Weapons Convention expertise  
National and international legal expertise

2. *Each State Party shall cooperate with other States Parties and afford the appropriate form of legal assistance to facilitate the implementation of the obligations under this Article.*

**Stated Function:** Assist other States Parties to legally implement CWC.

**Functional Category:** Legislative

**Organizational Capabilities:** Diplomatic expertise  
National and international legal expertise

3. *Each State Party, during the implementation of its obligations under this Convention, shall assign the highest priority to ensuring the safety of people and to protecting the environment, and shall cooperate as appropriate with other States Parties in this regard.* 2/

2/ *A view was expressed that the degree of priority to be attached to the environment with respect to national obligations in Article VII needs further consideration.*

<b>Stated Function:</b>	Assign human safety and environmental protection highest priority during CWC implementation.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Knowledge of environmental safety standards and practices
<b>Stated Function:</b>	Assist other States Parties in assigning human safety and environmental protection highest priority during CWC implementation.
<b>Functional Category:</b>	Technical Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Knowledge of environmental safety standards and practices

4. *Each State Party shall inform the Organization of the legislative and administrative measures taken to implement the Convention.*

<b>Stated Function:</b>	Inform Organization of implementation measures.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to International Organization Authorized access to pertinent information

5. States Parties shall treat as confidential and afford special handling to information which they receive in connection with the implementation of the Convention from the Organization. They shall treat such information exclusively in connection with their rights and obligations under the Convention and in accordance with the provisions set out in the Annex on the Protection of Confidential Information.

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*3/ A view was expressed that further discussion on this subject is necessary.*

<b>Stated Function:</b>	Protect confidential information in accordance with Annex on Protection of Confidential Information.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Experience with handling classified/confidential documents CBI, and national security information
<b>Implied Function:</b>	Develop procedures for compartmentalization and protection of Confidential Business Information in the U.S.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Chemical industry/production expertise Experience with handling classified/confidential documents, CBI, and national security information

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6. In order to fulfill its obligations under the Convention, each State Party must appoint a National Authority and inform the Organization of the designated National Authority at the time that the Convention enters into force for it. The National Authority shall serve as the national focal point for effective liaison with the Organization and other States Parties. 1/

*1/ The view was expressed that the role of the National Authority might need to be further developed.*

<b>Stated Function:</b>	Appoint a National Authority.
<b>Organizational Capabilities:</b>	Presidential authority
<b>Stated Function:</b>	Serve as the national focal point for effective liaison with Organization and other States Parties.
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise Executive authority

7. *Each State Party undertakes to cooperate with the Organization in the exercise of all its functions and in particular to provide assistance to the Technical Secretariat including data reporting, assistance for international on-site inspections, provided for in this Convention, and a response to all its requests for the provision of expertise, information and laboratory support.*

<b>Stated Function:</b>	Cooperate with and assist the Organization.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Authorized access to chemical analysis laboratory On-site verification expertise Database management

1. *States Parties shall consult and cooperate, directly among themselves, or through the Organization or other appropriate international procedures, including procedures within the framework of the United Nations and in accordance with its Charter, on any matter which may be raised relating to the objectives or the implementation of the provisions of this Convention.*

<b>Stated Function:</b>	Cooperate with States Parties for CWC implementation.
<b>Functional Category:</b>	Policy and Technical Support
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise

2. States Parties shall make every possible effort to clarify and resolve, through exchange of information and consultations among them, any matter which may cause doubt about compliance with this Convention, or which gives rise to concerns about a related matter which may be considered ambiguous. A Party which receives a request from another Party for clarification of any matter which the requesting Party believes causes such doubts or concerns shall provide the requesting Party, not later than ... days after the request, with information sufficient to answer the doubts or concerns raised along with an explanation on how the information provided resolves the matter. Nothing in this Convention affects the right of any two or more States Parties to arrange by mutual consent for inspections or any other procedures among themselves to clarify and resolve any matter which may cause doubts about compliance or gives rise to concerns about a related matter which may be considered ambiguous. Such arrangements shall not affect the rights and obligations of any State Party under other provisions of this Convention.

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**Stated Function:**

\*\*Cooperate in clarification of disputes and ambiguities.

**Functional Category:**

Policy

**Organizational Capabilities:**

Authorized access to pertinent information  
Chemical Weapons Convention expertise  
Diplomatic expertise

4. A State Party shall have the right to request the Executive Council to obtain clarification from another State Party on any situation which may be considered ambiguous or which gives rise to doubts about its compliance with the Convention. In such a case, the following shall apply:

(a) The Executive Council shall forward the request for clarification to the State Party concerned not later than 24 hours after its receipt;

(b) The requested State Party shall provide the clarification to the Executive Council not later than seven days after the receipt of the request;

(c) The Executive Council shall forward the clarification to the requesting State Party not later than 24 hours after its receipt;

(d) In the event that the requesting State Party deems the clarification to be inadequate, it may request the Executive Council to obtain from the requested State Party further clarification;

(e) For the purpose of obtaining further clarification requested under subparagraph (d) above, the Executive Council may set up a group of experts to examine all available information and data relevant to the situation causing the doubt. The group of experts shall submit a factual report to the Executive Council on its findings;

(f) Should the requesting State Party consider the clarification obtained under subparagraphs (d) and (e) above to be unsatisfactory, it may request a special meeting of the Executive Council in which States Parties involved not members of the Executive Council shall be entitled to take part. In such a special meeting, the Executive Council shall consider the matter and may recommend any measure it deems appropriate to cope with the situation.

<b>Stated Function:</b>	Request clarification from Executive Council on situations in other State Parties which are considered ambiguous.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to International Organization Authorized access to pertinent information Chemical Weapons Convention expertise Diplomatic expertise
<b>Stated Function:</b>	Provide clarification on ambiguities to the Executive Council.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Chemical Weapons Convention expertise Diplomatic expertise

**3. All States Parties to the Convention undertake to facilitate, and shall have the right to participate in, the fullest possible exchange of equipment, material and scientific and technological information concerning means of protection against chemical weapons.**

**Stated Function:**

Facilitate information exchange on protection against CW.

**Functional Category:**

Other Communications

**Organizational Capabilities:**

CW defense expertise

Diplomatic expertise

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**4. The Technical Secretariat shall establish within 180 days after the entry into force of the Convention and maintain, for the use of any requesting State Party, a data bank containing freely available information concerning various means of protection against chemical weapons as well as such information as may be provided by States Parties.**

**The Technical Secretariat shall also, within the resources available to it, and at the request of a State Party, provide expert advice and assist it in identifying how its programmes for the development and improvement of a protective capacity against chemical weapons could be implemented.**

**Implied Function:**

Request information from the Organization on protective measures.

**Functional Category:**

Other Communications

**Organizational Capabilities:**

Access to International Organization

**Implied Function:**

Provide information to the Organization on protective measures.

**Functional Category:**

Other Communications

**Organizational Capabilities:**

Access to International Organization

CW defense expertise

6. *Each State Party undertakes to provide assistance through the Organization and to this end to elect:*

(i) *to contribute to the voluntary fund for assistance to be established by the Conference of the States Parties at its first session; and/or*

(ii) *to conclude, if possible within 180 days after the entry into force of the Convention for it, agreements with the Organization concerning the procurement, upon demand, of assistance; and/or*

(iii) *to declare within 180 days after the entry into force of the Convention for it the kind of assistance it might provide in response to an appeal by the Organization. If, however, a State Party is unable to provide the assistance envisaged in its declaration, it is still under obligation to provide assistance in accordance with this paragraph.*

<b>Stated Function:</b>	Contribute to voluntary fund for assistance to victim states of CW use.
<b>Functional Category:</b>	Policy and Technical Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Executive authority
 <b>Stated Function:</b>	 Conclude agreements with other States Parties on assistance in cases of CW use.
<b>Functional Category:</b>	Policy and Technical Support
<b>Organizational Capabilities:</b>	CW defense expertise Diplomatic expertise

2. *The States Parties to this Convention, subject to its provisions, shall:*

(a) *have the right, individually or collectively, to conduct research with, to develop, produce, acquire, retain, transfer, and use chemicals;*

(b) *undertake to facilitate, and have the right to participate in, the fullest possible exchange of chemicals, equipment and scientific and technical information relating to the development and application of chemistry for purposes not prohibited by this Convention;*

(c) *not impose among themselves any restrictions [on a discriminatory basis] which would impede development and promotion of scientific and technological knowledge in the field of chemistry for purposes not prohibited under the Convention.*

*[(d) undertake to withdraw all existing discriminatory restrictions in the chemical field applied to States Parties as soon as the Convention enters into force.]*

*[(d) undertake to review the existing national regulations in the field of trade in chemicals in order to render them consistent with the object and purposes of this Convention.]*

*[/] Some delegations hold the view that exceptions should be made for existing restrictions required by State Parties to prevent the proliferation of chemical weapons, to advance other objectives of the Convention, or for other important national foreign policy objectives.*

<b>Stated Function:</b>	Undertake to withdraw discriminatory restrictions in chemical field applied to States Parties.
<b>Functional Category:</b>	Legislative
<b>Organizational Capabilities:</b>	Chemical industry/production expertise Knowledge of current regulations and trade restrictions governing chemical activity

MEASURES TO REDRESS A SITUATION AND TO ENSURE  
COMPLIANCE, INCLUDING SANCTIONS

3. In cases where serious damage to the objectives and purposes of the Convention may result from actions prohibited by the Convention, in particular by Article I, the Conference of the States Parties may recommend collective measures to States Parties in conformity with international law. 2/

2/ The view was expressed that further consideration should be given to this issue in connection with Article VIII, paragraph 20 (d).

## Implied Function:

Respond to recommendation for collective action among States Parties to redress serious damage to objectives and purposes of the Convention.

## Functional Category:

Policy and Technical Support

## Organizational Capabilities:

Chemical Weapons Convention expertise  
Diplomatic expertise  
Executive authority

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1. Any State Party may propose amendments to this Convention 2/ including procedures in paragraphs 2 and 3 of this Article except proposals concerning provisions subject to a simplified amendment procedure as provided for under paragraphs 4 and 5.

2/ The view was expressed that provisions which, if amended, would change the character of the Convention, should not be subject to amendments.

## Stated Function:

\*\*Propose amendments to the Convention.

## Functional Category:

Policy

## Organizational Capabilities:

Chemical Weapons Convention expertise  
Diplomatic expertise  
Executive Authority

2. The text of a proposed amendment shall be submitted to the Director-General of the Technical Secretariat for circulation to all States Parties of the Convention. It shall be considered only by an Amendment Conference. Such an Amendment Conference shall be convened if one third or more of the States Parties notify to the Director-General not later than days after its circulation that they support further consideration of the proposal. The Amendment Conference shall be held immediately following a regular session of the Conference of the States Parties unless the requesting States Parties ask for an earlier meeting. In no case shall an Amendment Conference be held less than 60 days after the circulation of the proposed amendment.

<b>Implied Function:</b>	Participate in Amendment Conference.
<b>Functional Category:</b>	Policy
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise, Diplomatic expertise Executive Authority

3. Amendments shall enter into force for all States Parties 30 days after deposit of the instruments of ratification or acceptance by all the States Parties referred to under (b) below:

(a) When adopted by the Amendment Conference by a positive vote of a majority 3/ of States Parties with no State Party casting a negative vote: 4/ 5/ 6/

(b) And ratified or accepted by all those States Parties casting a positive vote at the Amendment Conference.

3/ The view was expressed that "majority" needs further clarification.

4/ The view was expressed that the adoption of an amendment by consensus should be further considered. Another view was expressed that decisions on proposed amendments could also be taken by a qualified majority, in particular, on amendments to (parts of) Article VIII.

5/ The view was expressed that the effect of allowing as little as one negative vote to prevent the adoption of a proposal for an amendment might in practice make the Convention unamendable.

6/ Concerns were expressed as to the fact that with the proposed provision a State Party could be bound by an amendment without having approved or ratified it.

Implied Function:

Ratify (reject) amendments to Convention.

Functional Category:

Legislative

Organizational Capabilities:

Access to International Organization  
Authorized access to pertinent information,  
Legislative authority

5. (a) Proposals for amendments under a simplified amendment procedure shall be transmitted together with the necessary information to the Director-General of the Technical Secretariat. Additional information for the evaluation of the proposal may be provided by any State Party and the Director-General. The Director-General shall promptly communicate any such proposals and information to all States Parties and the Executive Council;

(b) The Executive Council shall examine the proposal in the light of all information available to it. Not later than 90 days after its receipt, the Executive Council shall notify its recommendation to all States Parties for consideration. States Parties shall acknowledge receipt within 10 days;

(c) If the Executive Council recommends to all States Parties that the proposal be adopted, it shall be considered approved if no more than [x] States Parties object to it not later than 90 days after receipt of the recommendation. If the Executive Council recommends that the proposal be rejected, it shall be considered rejected if no more than [x] States Parties object to the rejection not later than 90 days after receipt of the recommendation; 3/

(d) If a recommendation of the Executive Codicil does not meet with the acceptance required under subparagraph (c), a decision on the proposal shall be taken as a matter of substance by the Conference of the States Parties at its next session;

(e) The Executive Council may itself propose amendments, making use of information provided by the Director-General. In such cases, subparagraphs (c) and (d) shall be applied accordingly;

(f) The Director-General shall notify all States Parties of any decision under this paragraph;

(g) An amendment approved under this procedure shall enter into force for all States Parties 60 days after the date of its notification by the Director-General unless otherwise recommended by the Executive Council or decided by the Conference of the States Parties.

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3/ The view was expressed that this amendment procedure should not constitute a precedent with regard to powers and functioning of the Executive Council.

<b>Stated Function:</b>	Provide additional information for use in evaluating simplified amendments.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to pertinent information Chemical Weapons Convention expertise Diplomatic expertise
<b>Stated Function:</b>	Acknowledge receipt of amendment.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Diplomatic expertise Secure international communications capability
<b>Implied Function:</b>	Object (not object) to amendment.
<b>Functional Category:</b>	Policy
<b>Organizational Capabilities:</b>	Access to pertinent information Chemical Weapons Convention expertise Executive authority

2. When a dispute arises between two or more Parties relating to the interpretation or application of this Convention, the Parties concerned shall consult together with a view to the expeditious settlement of the dispute by negotiation or by other peaceful means of the Parties' choice, including recourse to appropriate organs of the Convention and/or, by mutual consent, referral to the International Court of Justice in conformity with the Statute of the Court. The States Parties involved shall keep the Executive Council informed of actions being taken.

<b>Stated Function:</b>	Consult with other States Parties to resolve disputes.
<b>Functional Category:</b>	Policy
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise
<b>Stated Function:</b>	Inform the Executive Council of actions taken to resolve disputes.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to International Organization

2. If the Director-General of the Technical Secretariat has any information which in his opinion may require a revision of the Schedules or one or more of the guidelines, he shall communicate that information to all States Parties and the Executive Council.  
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3/ [Views were expressed] [It is understood] that the Scientific Advisory Board should be able to submit to the Director General of the Technical Secretariat, or through him to the competent organs of the Organization, any information available to it which in its opinion could lead to or contribute to a revision.

7. When a proposal has been made for a revision of one or more of the guidelines, the Director-General of the Technical Secretariat shall undertake a review of the Schedules affected by such a revision and communicate the results to all States Parties and the Executive Council at least [30] days before the proposal is examined by the Executive Council. 1/

1/ [Views were expressed] [It is understood] that the Scientific Advisory Board should be able to submit to the Director General of the Technical Secretariat, or through him to the competent organs of the Organization, any information available to it which in its opinion could lead to or contribute to a revision.

<b>Stated Function:</b>	Receive information concerning revision of chemical schedules and guidelines.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to International Organization Secure international communications capability
<b>Implied Function:</b>	Provide information to the Organization concerning potential need for amendments to the chemical schedules and guidelines.
<b>Functional Category:</b>	Other Communications
<b>Organizational Capabilities:</b>	Access to International Organization Authorized access to pertinent information Chemical Weapons Convention expertise

1. *The obligation to protect confidential information shall pertain to the verification of both civil and military activities and facilities. As specified in Article VIII, the Organization shall:*

(a) *require only the minimum amount of information and data necessary for the timely and efficient carrying out of its responsibilities under the Convention;*

(b) *take measures necessary to ensure that inspectors and other staff members of the Technical Secretariat meet the highest standards of efficiency, competence, and integrity;*

(c) *develop agreements and regulations to implement the provisions of the Convention and shall specify as precisely as possible the information to which the Organization shall be given access by a State Party.*

<b>Stated Function:</b>	Develop agreements with the Organization regarding confidential information.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Access to International Organization Chemical industry/production expertise Chemical Weapons Convention expertise

(a) *Information shall be considered confidential if*

- (i) *it is so designated by the State Party from whom the information was obtained and to which the information refers; or*
- (ii) *in the judgement of the Director-General, its unauthorized disclosure could reasonably be expected to cause damage to the State Party to which it refers or to the mechanisms for implementation of the Convention.*

(b) *All data and documents obtained by the Technical Secretariat shall be evaluated by the appropriate unit of the Technical Secretariat in order to establish whether they contain confidential information. Data required by States Parties to be assured of the continued compliance with the Convention by other States Parties shall be routinely provided to them. Such data shall encompass:*

- (i) *the initial and annual reports and declarations provided by States Parties under Articles III, IV, V and VI;*
- (ii) *general reports on the results and effectiveness of verification activities; and*
- (iii) *information to be supplied to all States Parties in accordance with the provisions of the Convention.*

(c) *No information obtained by the Organization in connection with implementation of the Convention shall be published or otherwise released, except, as follows:*

- (i) *General information on the implementation of the Convention may be compiled and released publicly in accordance with the decisions of the Conference of the States Parties or the Executive Council. [Prior to public release, all data and documents shall be evaluated by a specially designated unit of the Technical Secretariat to ensure that they do not contain confidential information.]*
- (ii) *Any information may be released with the express consent of the State Party to which the information refers.*
- (iii) *Information classified as confidential shall be released by the Organization only through agreed procedures which ensure that the release of information only occurs in strict conformity with the needs of the Convention.*

<b>Stated Function:</b>	Identify confidential information.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Chemical industry/production expertise, National security expertise
<b>Stated Function:</b>	Identify information for release.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Chemical industry/production expertise National security expertise

(e) Confidential information shall be stored securely at the premises of the Organization. Some data or documents may also be stored with the national authority of a State Party. Sensitive information, *inter alia*, photographs, plans and other documents required only for the inspection of a specific facility may be kept under lock and key at this facility in conformity with the agreement to be concluded on the basis of a relevant model.

<b>Stated Function:</b>	Provide for proper handing of information classified confidential under the Convention.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Experience with handling classified/confidential documents, CBI, and national security information

3. States Parties shall treat information which they receive from the Organization in accordance with the level of confidentiality established for that information. [Upon request States Parties shall provide details on the handling of information provided to them by the Organization.]

<b>Stated Function:</b>	Provide accountability for handling of confidential information.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Access to International Organization Authorized access to pertinent information Experience with handling classified/confidential documents,CBI, and national security information

4. States Parties shall, to the extent possible, cooperate and support the Director-General of the Technical Secretariat in investigating any breach or alleged breach of confidentiality and in taking appropriate action in case a breach has been established.

<b>Stated Function:</b>	Cooperate with investigations concerning improper handling of information classified under the Convention.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Diplomatic expertise Experience with handling classified/confidential documents, CBI, and national security information
<b>Stated Function:</b>	Take appropriate action in cases of breaches of security.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Experience with handling classified/confidential documents, CBI, and national security information

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6. For breaches involving both a State Party and the Organization [or specifically within the Technical Secretariat] a "Commission for the settlement of disputes related to confidentiality", set up as a subsidiary ad hoc body of the Conference of the States Parties, shall consider the case. This Commission shall be appointed by the Conference of the States Parties.

<b>Stated Function:</b>	Respond to requirements of the "Commission for the settlement of disputes related to confidentiality."
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Diplomatic expertise Experience with handling classified/confidential documents, CBI, and national security information

(a) *Not later than 30 days after the Convention enters into force for it, a State Party shall take such measures as it considers appropriate to secure its storage facility(ies) and shall prevent any movement of its chemical weapons, except their removal for destruction.*

<b>Stated Function:</b>	Secure storage facilities.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Access to storage facilities
<b>Stated Function:</b>	Prevent movement of chemical weapons, except removal for destruction.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Access to chemical weapons and storage facilities

(b) *In order to prepare its storage facility(ies) for international verification, a State Party shall ensure that its chemical weapons at its storage facility(ies) are so configured that seals and monitoring devices may be effectively applied, and that such configuration allows ready access for such verification.*

<b>Stated Function:</b>	Ensure chemical weapons are configured to accept seals and monitoring devices.
<b>Functional Category:</b>	Monitoring Support
<b>Organizational Capabilities:</b>	Knowledge of tags and seals Authorized access to CW storage facilities Responsibility for CW destruction

*3. The State Party shall ensure that its chemical weapons destruction facility(ies) are constructed and operated in a manner to ensure the destruction of the chemical weapons; and that the destruction process can be verified under the provisions of this Convention.*

<b>Stated Function:</b>	Construct and operate destruction facilities to ensure verification.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction
 <b>Implied Function:</b>	 Develop verifiable operating procedures for destruction facilities.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction

(a) On the basis of the detailed plan for destruction and proposed measures for verification submitted by the State Party, and as the case may be, on experience from previous inspections and on the relevant agreement(s) on subsidiary arrangements, the Technical Secretariat shall prepare before each destruction period, a plan for verifying the destruction of chemical weapons, consulting closely with the State Party. Any differences between the Technical Secretariat and the State Party should be resolved through consultations. Any unresolved matters shall be forwarded to the Executive Council for appropriate action with a view to facilitating the full implementation of the Convention.

(b) The agreed combined detailed plans for destruction and verification plans, with an appropriate recommendation by the Technical Secretariat, will be forwarded to the members of the Executive Council for review. The members of the Executive Council shall review the plans with a view to approving them, consistent with verification objectives. This review is designed to determine that the destruction of chemical weapons, as planned, is consistent with the obligations under the Convention and the objective of destroying the chemical weapons. It should also confirm that verification schemes for destruction are consistent with verification objectives, and are efficient and workable. This review should be completed 60 days before the destruction period.

(c) Each member of the Executive Council may consult with the Technical Secretariat on any issues regarding the adequacy of the combined plan for destruction and verification. If there are no objections by any members of the Executive Council, the plan shall be put into action.

(d) If there are any difficulties, the Executive Council shall enter into consultations with the State Party to reconcile them. If any difficulties remain unresolved they should be referred to the Conference of the States Parties.

(e) After a review of the detailed plans of destruction of chemical weapons, the Technical Secretariat, if the need arises, will enter into consultation with the State Party concerned in order to ensure its chemical weapons destruction facility(ies) is (are) designed to assure destruction of chemical weapons, to allow advanced planning on how verification measures may be applied and to ensure that the application of verification measures is consistent with proper facility(ies) operation, and that the facility(ies) operation allows appropriate verification.

(f) Destruction and verification should proceed according to the agreed plan as referred to above. Such verification should not interfere with the destruction process.

Stated Function:	Consult with the Organization on CW destruction verification plan.
Functional Category:	Other Communications
Organizational Capabilities:	Access to International Organization CW destruction expertise

*Within 180 days after entry into force of the Convention for it, a State shall conclude with the Organization agreements on subsidiary arrangements for verification of their storage facilities. Such agreements shall be based on a Model Agreement and shall specify for each storage facility the number, intensity, duration of inspections, detailed inspection procedures and the installation, operation and maintenance of the seals and monitoring devices by the Technical Secretariat.*

**Stated Function:**

Conclude facility agreements for storage facilities.

**Functional Category:**

Facility Agreements

**Organizational Capabilities:**

Access to International Organization  
Chemical Weapons Convention expertise  
Executive Authority  
On-site verification expertise  
Diplomatic expertise  
Responsibility for CW storage, destruction, and related facilities

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*(d) When all chemical weapons have been removed from the storage facility, the Technical Secretariat shall certify the declaration of the National Authority to that effect. After this certification, the Technical Secretariat shall terminate the international systematic monitoring of the storage facility and will promptly remove all devices and monitoring equipment installed by the Inspectors.*

**Implied Function:**

Declare removal of all CWs from a storage site.

**Functional Category:**

Operating Functions - Reporting

**Organizational Capabilities:**

Authorized access to pertinent information

(b) The (Director-General of the) Technical Secretariat shall notify the State Party of its decision to inspect or visit the storage facility 48 hours prior to the planned arrival of the inspection team at the facility for systematic inspections or visits. In the event of inspections or visits to resolve urgent problems, this period may be shortened. The (Director-General of the) Technical Secretariat shall specify the purpose(s) of the inspection or visit.

(c) A State Party shall make any necessary preparations for the arrival of the Inspectors and shall ensure their expeditious transportation from their point of entry on the territory of the State Party to the storage facility. The agreement on subsidiary arrangements will specify administrative arrangements for Inspectors.

**Stated Function:** Receive request for inspection of storage facility.

**Functional Category:** Other Communications

**Organizational Capabilities:** Secure international communications capability

**Stated Function:** Prepare for and transport inspectors to inspection site.

**Functional Category:** Escort

**Organizational Capabilities:** Inspection support expertise

oo

(d) Inspectors shall, in accordance with agreements on subsidiary arrangements:

- have unimpeded access to all parts of the storage facilities including any munitions, devices, bulk containers, or other containers therein. While conducting their activity, Inspectors shall comply with the safety regulations at the facility. The items to be inspected will be chosen by the Inspectors; and
- receive samples taken at their request from any devices and bulk containers and other containers at the facility.

**Implied Function:** Provide samples as requested by inspectors.

**Functional Category:** Escort

**Organizational Capabilities:** Chemical industry/production expertise  
Knowledge of sampling techniques

(a) *The State Party shall notify the Technical Secretariat [14] days in advance of the exact timing of removal of chemical weapons from the storage facility and of the planned arrival at the facility where they will be destroyed.*

(b) *The State Party shall provide the Inspectors with the detailed inventory of the chemical weapons to be moved. The Inspectors shall be present when chemical weapons are removed from the storage facility and shall verify that the chemical weapons on the inventory are loaded on to the transport vehicles. Upon completion of the loading operations, the Inspectors shall seal the cargo and/or means of transport, as appropriate.*

<b>Stated Function:</b>	Provide advance notice of the timing of shipment of CWs for destruction.
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<b>Functional Category:</b>	Operating Functions - Reporting
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<b>Organizational Capabilities:</b>	Authorized access to pertinent information
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<b>Stated Function:</b>	Provide advance notice of the inventory of shipment of CWs for destruction.
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<b>Functional Category:</b>	Operating Functions - Reporting
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<b>Organizational Capabilities:</b>	Authorized access to pertinent information
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(a) *For each destruction facility, States Parties should conclude with the Organization detailed agreements on subsidiary arrangements for the systematic verification of destruction of chemical weapons. Such agreements shall be based on a Model Agreement and shall specify, for each destruction facility, the detailed on-site inspection procedures and arrangements for the removal of chemical weapons from the storage facility at the destruction facility, transport from this storage facility to their destruction and the monitoring by on-site instruments, taking into account the specific characteristics of the destruction facility and its mode of operation. The Model Agreement shall include provisions to take into account the need for maintenance and modifications.*

<b>Stated Function:</b>	Conclude subsidiary arrangements for verification at destruction sites.
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<b>Functional Category:</b>	Facility Agreements
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<b>Organizational Capabilities:</b>	Experience with CW transportation, sampling, storage, and destruction On-site verification expertise
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(d) After the completion of each period of destruction, the Technical Secretariat shall certify the declaration of the National Authority, reporting the completion of destruction of the designated quantity of chemical weapons.

<b>Stated Function:</b>	Declare destruction of designated quantity of chemical weapons.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information

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E. Declarations with respect to chemical weapons production facilities under the control of others on the territory of the State Party

All elements contained in part II A and D of this Annex shall be declared. It is the responsibility of the State Party to make appropriate arrangements with the State which controls or controlled the facility that the declarations are made. If the State Party is not able to fulfil this obligation, it shall state the reasons thereof. 1/

1/ Further consideration is needed with regard to the obligation to provide the above information.

<b>Stated Function:</b>	Report inability to fulfill obligations to destroy CWFFs.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Responsibility for CWPF destruction

3. All maintenance activities shall be subject to monitoring by the Technical Secretariat.

<b>Stated Function:</b>	Subject maintenance activities to monitoring.
<b>Functional Category:</b>	Monitoring Support
<b>Organizational Capabilities:</b>	CW storage expertise On-site verification expertise

3. A State Party which intends to carry out a conversion of facilities after the Convention enters into force shall submit to the Technical Secretariat a general facility conversion plan, and subsequently shall submit annual plans. Conversion measures shall be carried out under international verification.

<b>Stated Function:</b>	Submit facility conversion plan for CWPPFs used for CW destruction.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Responsibility for CWPPF destruction
<b>Stated Function:</b>	Submit annual plans.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Responsibility for CWPPF destruction
<b>Stated Function:</b>	Carry out conversion under international verification.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Responsibility for CWPPF destruction

4. Should the State Party have the need of converting into a chemical weapons destruction facility an additional chemical weapons production facility that had been closed after the Convention entered into force, it shall inform the Technical Secretariat thereof (at least three) months in advance. The Technical Secretariat, in conjunction with the State Party, shall make sure that necessary measures are taken to render that facility, after its conversion, inoperable as a chemical weapons production facility.

A facility converted for the destruction of chemical weapons shall not be more fit for resuming chemical weapons production than a facility which has been closed and is under maintenance. Its reactivation shall require no less time.

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8. The set of measures carried out for the purposes of converting a chemical weapons production facility into a chemical weapons destruction facility shall not be less than that which is provided for the disabling of other facilities to be carried out during the three months after the Convention enters into force.

<b>Stated Function:</b>	Ensure nonviability of conversion of destruction facilities to CWPFs.
<b>Functional Category:</b>	Destruction
<b>Organizational Capabilities:</b>	Chemical industry/production expertise Responsibility for CWPF destruction

Review of detailed plan

(a) On the basis of the detailed plan for destruction and proposed measures for verification submitted by the State Party, and on experience from previous inspections, the Technical Secretariat shall prepare a plan for verifying the destruction of the facility, consulting closely with the State Party. Any differences between the Technical Secretariat and the State Party concerning appropriate measures should be resolved through consultations. Any unresolved matters shall be forwarded to the Executive Council 1 for appropriate action with a view to facilitating the full implementation of the Convention.

(b) To ensure that the provisions of Article V and this Annex are fulfilled, the combined plans for destruction and verification shall be agreed upon between the Executive Council and the State Party. This agreement should be completed [60] days before the planned initiation of destruction.

(c) Each member of the Executive Council may consult with the Technical Secretariat on any issues regarding the adequacy of the combined plan for destruction and verification. If there are no objections by any members of the Executive Council, the plan shall be put into action.

(d) If there are any difficulties, the Executive Council should enter into consultations with the State Party to reconcile them. If any difficulties remain unresolved they should be referred to the Conference of the States Parties. The resolution of any differences over methods of destruction should not delay the execution of other parts of the destruction plan that are acceptable.

1 The role of the Executive Council in the review process will need to be reviewed in the light of its composition and decision-making process.

<b>Stated Function:</b>	Consult with Organization on the destruction verification plan for CWPFs.
<b>Functional Category:</b>	Facility Agreements
<b>Organizational Capabilities:</b>	Access to International Organization Diplomatic expertise On-site verification expertise Responsibility for CWPF destruction

2. Agreements on subsidiary arrangements /

(a) Within [6] months after entry into force of the Convention, States Parties shall conclude with the Organization detailed agreements on subsidiary arrangements for the systematic monitoring of their chemical weapons production facilities. Such agreements shall be based on a Model Agreement and shall specify for each production facility the detailed inspection procedures and arrangements for the installation, operation and maintenance of the seals and monitoring devices by the Technical Secretariat, taking into account the specific characteristics of each facility.

/ The coverage of the subsidiary arrangements is to be discussed.

<b>Stated Function:</b>	Establish subsidiary arrangement for monitoring CWPF destruction.
<b>Functional Category:</b>	Facility Agreements
<b>Organizational Capabilities:</b>	Access to International Organization Diplomatic expertise On-site verification expertise Responsibility for CWPF destruction Specific knowledge of facility

1. A State Party may transfer chemicals in Schedule 1 outside its territory only to another State Party and only for research, medical, pharmaceutical or protective purposes in accordance with paragraph 2 above.
2. Chemicals transferred shall not be retransferred to a third State.
3. Thirty days prior to any transfer to another State Party both States Parties shall notify the Technical Secretariat.

<b>Stated Function:</b>	Notify Technical Secretariat of Schedule 1 chemical transfer to other State Party.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Executive authority Regulatory authority

4. *Each State Party shall make a detailed annual declaration regarding transfers during the previous calendar year. The declaration shall be submitted not later than 31 March for the preceding calendar year and shall for each chemical in Schedule 1 include the following information:*

<b>Stated Function:</b>	Make detailed annual declarations of Schedule 1 chemical transfers.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Regulatory authority
 <b>Implied Function:</b>	 Collect and compile data on transfer of Schedule 1 chemicals.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management

1. (a) *Each State Party which produces chemicals in Schedule 1 for research, medical, pharmaceutical or protective purposes shall carry out the production at a single small-scale facility approved by the State Party, the only exceptions being those set forth in paragraphs 2 and 4 below.*

(b) *The production at a single small-scale facility shall be carried out in reaction vessels in production lines not configured for continuous operation; the volume of such a reaction vessel shall not exceed 100 liters while the total volume of all reaction vessels with a volume exceeding 5 litres shall not be more than 500 litres.*

<b>Stated Function:</b>	Carry out Schedule 1 chemical production at the Single Small-Scale Facility according to Convention guidelines.
<b>Functional Category:</b>	SSSF
<b>Organizational Capabilities:</b>	Chemical industry/production expertise Chemical Weapons Convention expertise Responsibility for Single Small-Scale Facility

2. (a) Production of Schedule 1 chemicals in aggregate quantities not exceeding 10 kg per year may be carried out for protective purposes at one facility outside a single small-scale facility.

(b) Production of Schedule 1 chemicals in quantities of more than 100 g per year may be carried out for research, medical or pharmaceutical purposes outside a single small-scale facility in aggregate quantities not exceeding 10 kg per year per facility. 1/

Such facilities shall be approved by the State Party.

3. Each State Party, during production under paragraphs 1 and 2, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall conduct such production in accordance with national standards for safety and emissions. 2/

4. Synthesis of Schedule 1 chemicals for research, medical or pharmaceutical purposes, but not for protective purposes, may be carried out at laboratories 3/ [approved by the State Party] in aggregate quantities less than 100 g per year per facility. 4/

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1/ A view was expressed that ultratoxic substances (to be determined) shall not be allowed to be produced in excess of 10 g per year.

2/ A view was expressed that the degree of priority to be attached to the environment for purposes not prohibited by the Convention needs further consideration.

3/ A view was expressed that if so requested by the Technical Secretariat detailed information shall be submitted.

4/ The question whether transfer of Schedule 1 chemicals from a laboratory should be permitted or not needs further discussion.

<b>Stated Function:</b>	Carry out Schedule 1 chemical production at one facility outside the Single Small-Scale Facility according to Convention guidelines and for protective purposes only.
<b>Functional Category:</b>	SSSF
<b>Organizational Capabilities:</b>	Responsibility for Schedule 1 chemical production/facilities
<b>Stated Function:</b>	Carry out Schedule 1 production for research according to Convention guidelines.
<b>Functional Category:</b>	SSSF
<b>Organizational Capabilities:</b>	Responsibility for Schedule 1 chemical production/facilities
<b>Stated Function:</b>	Carry out Schedule 1 synthesis for research according to Convention guidelines.
<b>Functional Category:</b>	SSSF
<b>Organizational Capabilities:</b>	Responsibility for Schedule 1 chemical production/facilities
<b>Stated Function:</b>	Approve all facilities outside the SSSF for production of Schedule 1 chemicals.
<b>Functional Category:</b>	Enforcement/Judicial
<b>Organizational Capabilities:</b>	Regulatory authority
<b>Stated Function:</b>	Ensure the highest priority to human safety and environmental protection in the production of Schedule 1 chemicals.
<b>Functional Category:</b>	SSSF
<b>Organizational Capabilities:</b>	Knowledge of national safety and emission standards Responsibility for Schedule 1 chemical production/facilities

**SINGLE SMALL-SCALE FACILITY****I. Declarations****A. *Initial declarations***

*Each State Party which plans to operate such a facility shall provide the Technical Secretariat with the location and a detailed technical description of the facility, including an inventory of equipment and detailed diagrams. For existing facilities, this information shall be provided not later than 30 days after the Convention enters into force for the State Party. Information on new facilities shall be provided not later than 180 days before operations are to begin.*

<b>Stated Function:</b>	Provide information on the Single Small-Scale Facility to the Organization.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Responsibility for Single Small-Scale Facility

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<b>Cited Treaty Text</b>	<b>Annex 1 to Article VI</b> <b>(Activities Not Prohibited Under the Convention)</b> <b>Page 111</b>
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**B. *Advance notifications***

*Each State Party shall give advance notification to the Technical Secretariat of planned changes related to the initial declaration. The notification shall be submitted not later than 180 days before the changes are to take place.*

<b>Stated Function:</b>	Give advance notice of changes to the Single Small-Scale Facility.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Responsibility for Single Small-Scale Facility

C. Annual declarations

(a) *Each State Party possessing a facility shall make a detailed annual declaration regarding the activities of the facility for the previous calendar year. The declaration shall be submitted not later than 31 March for the preceding calendar year and shall include:*

(b) *Each State Party possessing a facility shall make a detailed annual declaration regarding the projected activities and the anticipated production at the facility for the coming calendar year. The declaration shall be submitted not later than 31 October for the following calendar year and shall include:*

<b>Stated Function:</b>	Declare annually activity at Single Small-Scale Facility.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Responsibility for Single Small-Scale Facility

2. *The single small-scale facility shall be subject to systematic international on-site verification, through on-site inspection and monitoring with on-site instruments.*

<b>Stated Function:</b>	Submit Single Small-Scale Facility to verification.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Executive authority Inspection support expertise Responsibility for Single Small-Scale Facility

5. Within [3] [6] [12] 1/ 2/ months after the entry into force of the Convention each State Party possessing a facility shall conclude an agreement, 3/ based on a model for an agreement, with the Organization, covering detailed inspection procedures for the facility. 4/

Each State Party planning to establish such a facility after the entry into force of the Convention shall conclude an agreement with the Organization before the facility begins operation or is used.

Each agreement shall include: (to be developed).

1/ The view was expressed that the time periods for conclusion of arrangements for different types of facility subject to inspection under the Convention should be rationalized.

2/ A view was expressed that in light of the need for provisional inspection procedures, pending conclusion of the agreement, 12 months is an undue length of time.

3/ The view was expressed that negotiations on this agreement should commence immediately after the signing of the Convention.

4/ The view was expressed that pending conclusion of the agreement between a State Party and the Organization there would be a need for provisional inspection procedures to be formulated.

<b>Stated Function:</b>	Conclude agreement covering inspection procedures for Single Small-Scale Facility.
<b>Functional Category:</b>	Facility Agreements
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise Responsibility for Single Small-Scale Facility

**FACILITIES COVERED BY PARAGRAPH 2 OF THE SECTION ON PRODUCTION ABOVE****I. Declarations****A. Initial declarations**

*Each State Party shall provide the Technical Secretariat with the name, location and a detailed technical description of each facility or its relevant part(s) as requested by the Technical Secretariat. The facility producing Schedule 1 chemicals for protective purposes shall be specifically identified. For existing facilities, this information shall be provided not later than 30 days after the Convention enters into force for the State Party. Information on new facilities shall be provided not less than 180 days before operations are to begin.*

<b>Stated Function:</b>	Provide information on production facilities outside the Single Small-Scale Facility.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Regulatory authority
<b>Implied Function:</b>	Collect and compile information on Schedule 1 chemical production facilities outside Single Small-Scale Facility.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management

**B. Advance notifications**

*Each State Party shall give advance notification to the Technical Secretariat of planned changes related to the initial declaration. The notification shall be submitted not later than 180 days before the changes are to take place.*

<b>Stated Function:</b>	Give advance notice of changes to Schedule 1 chemical production facilities outside the Single Small-Scale Facility.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Responsibility for Schedule 1 chemical production/facilities

**C. Annual declarations**

(a) *Each State Party shall, for each facility, make a detailed annual declaration regarding the activities of the facility for the previous calendar year. The declaration shall be submitted not later than 31 March for the preceding calendar year and shall include:*

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(b) *Each State Party shall, for each facility, make a detailed annual declaration regarding the projected activities and the anticipated production at the facility for the coming calendar year. The declaration shall be submitted not later than 31 October for the following calendar year and shall include:*

<b>Stated Function:</b>	Declare annually activity at Schedule 1 chemical production facilities outside the Single Small-Scale Facility.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Responsibility for Schedule 1 chemical production/facilities
<b>Implied Function:</b>	Annually collect and compile data on activity at Schedule 1 chemical production facilities.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management



2. *The facility shall be subject to systematic international on-site verification through on-site inspection and monitoring with on-site instruments.*

<b>Stated Function:</b>	Submit Schedule 1 chemical production facilities outside the Single Small-Scale Facility to verification.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Executive authority Regulatory authority

4. Within [3] [6] [12] 1/2 months after the entry into force of the Convention each State Party possessing such (a) facility (facilities) shall conclude (an) agreement(s), 3/ based on a model for an agreement, with the Organization, covering detailed inspection procedures for the facility (facilities). 4/

Each State Party planning to establish such a facility after the entry into force of the Convention shall conclude an agreement with the Organization before the facility begins operation or is used.

Each agreement shall include: (to be developed).

1/ The view was expressed that the time periods for conclusion of arrangements for different types of facility subject to inspection under the Convention should be rationalized.

2/ A view was expressed that in light of the need for provisional inspection procedures, pending conclusion of the agreement, 12 months is an undue length of time.

3/ The view was expressed that negotiations on this agreement should commence immediately after the signing of the Convention.

4/ The view was expressed that pending conclusion of the agreement between a State Party and the Organization there would be a need for provisional inspection procedures to be formulated.

<b>Stated Function:</b>	Conclude agreements covering verification for Schedule 1 chemical production facilities outside the Single Small-Scale Facility.
<b>Functional Category:</b>	Facility Agreements
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Diplomatic expertise Responsibility for Schedule 1 chemical production facility

*The initial and annual declarations to be provided by a State Party under paragraphs 4 and 5 of Article VI shall include:*

1. *Aggregate national data on the production, processing and consumption of each chemical listed in Schedule 2, and on the export and import of the chemicals in the previous calendar year with a specification of the countries involved.* 21
2. *The following information for each facility which, during any of the previous three calendar years, produced, processed or consumed more than 1 tonne 3/ 4/ of chemicals listed in Schedule 2 Part A or which produced at any time [since 1 January 1946] [during the 15 years prior to the entry into force of the Convention] a chemical in Schedule 2 for chemical weapons purposes:* 5/

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2/ *Trading companies need further consideration.*

3/ *One delegation expressed the preference that the thresholds for declaration and verification should be based on production capacity.*

4 *The issue of the threshold of 1 tonne, in particular with regard to its application to a 3-year reference period, required further consideration.*

5/ *Further discussion is needed on the type of verification which would be required for facilities which have been producing for chemical weapons purposes but no longer produce chemicals on Schedule 2 A. It is suggested that the verification of the declaration with respect to such facilities would be achieved by an initial inspection. If it is then found that the relevant production equipment has been removed or destroyed, no further routine inspections would take place. Otherwise a routine inspection regime would be established. It has been suggested by some delegations to remove the reference to those facilities to the Annex to Article V, while other delegations prefer to keep the text in the relevant Annex to Article VI.*

<b>Stated Function:</b>	Declare initially aggregate activity for Schedule 2 chemicals.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Stated Function:</b>	Reporting annually aggregate activity for Schedule 2 chemicals.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Stated Function:</b>	Declare initially activity for individual Schedule 2 chemicals and facilities.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Stated Function:</b>	Report annually activity for individual Schedule 2 chemicals and facilities.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Implied Function:</b>	Collect and compile data on Schedule 2 chemicals and production facilities.
<b>Functional Category:</b>	Initial Declarations - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management Regulatory authority

Advance notifications

3. (a) *Each State Party shall annually notify the Technical Secretariat of facilities which intend, during the coming calendar year, to produce, process or consume more than ... of any chemical listed in Schedule 2. The notification shall be submitted not later than 31 October for the following calendar year and shall for each facility include the following information:*

(b) *Each State Party shall notify the Technical Secretariat of any production, processing or consumption planned after the submission of the annual notification under paragraph 3 (a), not later than [5], [10] [30] days before the production or processing is anticipated to begin. The notification shall for each facility include the information specified under paragraph 3 (a).*

<b>Stated Function:</b>	Give advance notification of anticipated Schedule 2 chemical activity.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Regulatory authority
<b>Implied Function:</b>	Collect and compile data on anticipated Schedule 2 chemical activity.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Database management Regulatory authority

Obligation and Frequency

5. (i) *Each facility notified to the Technical Secretariat under this Annex which during the previous 3 calendar years produced, processed or consumed more than 10 tonnes of chemicals listed in Schedule 2 Part A over a period of one year, shall be subject to systematic international on-site verification on a routine basis. The same applies to any facility which intends to produce, process or consume more than 10 tonnes of such chemicals during a period of one year.*

<b>Stated Function:</b>	Submit Schedule 2 chemical facilities to verification.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Inspection support expertise Regulatory authority

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7. *A State Party shall be notified by the (Director-General of the) Technical Secretariat of the decision to inspect a facility referred to in paragraphs 2 and 3 ... hours prior to the arrival of the inspection team.*

<b>Stated Function:</b>	Receive advance notification for inspection of Schedule 2 chemical facility.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Secure international communications capability

8. *Each State Party shall execute an agreement, based on a model agreement, with the Organization, within [6] months after the Convention enters into force for the State Party, governing the conduct of the inspections of the facilities declared by the State Party. The agreement shall provide for the detailed subsidiary arrangements which shall govern inspections at each facility [1]*

*[1] Several delegations considered that the model agreement should be elaborated as part of the negotiations on the Convention. A draft for such a Model Agreement is contained in Appendix II.*

<b>Stated Function:</b>	Execute facility agreements for Schedule 2 chemical facilities.
<b>Functional Category:</b>	Facility Agreements
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Chemical industry/production expertise Chemical Weapons Convention expertise Regulatory authority

1. *The Initial and Annual Declarations to be provided by a State Party under paragraph 5 of Article VI shall include the following information for each of the chemicals listed in Schedule 3:*

- (i) *The chemical name, common or trade name used by the facility, structural formula and Chemical Abstracts Service Registry Number.*
- (ii) *The total amount produced, processed, consumed, imported and exported in the previous calendar year, whenever such an amount is above 30 tonnes. 1/*
- (iii) *The final product or end use of the chemical in accordance with the following categories (to be developed).*
- (iv) *For each facility which during the previous calendar year produced, processed, consumed or transferred more than 30 tonnes of a chemical listed in Schedule 3 or which produced 2/ at any time [since 1 January 1946] [during the [15] years prior to the entry into force of the Convention] a chemical in Schedule 3 for chemical weapons purposes: 3/*

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1/ A view was expressed that the amount of 30 tonnes would be subject to change in case changes are made in Schedule 3.

2/ A view was expressed that the question of a quantitative threshold would need to be discussed in this context.

3/ It has been suggested by some delegations to remove the reference to those facilities to the Annex to Article V, while other delegations prefer to keep the text in the relevant Annex to Article VI.

<b>Stated Function:</b>	Declare initially aggregate activity for Schedule 3 chemicals.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Stated Function:</b>	Report annually aggregate activity for Schedule 3 chemicals.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Stated Function:</b>	Provide initial declaration of activity for individual Schedule 3 chemicals and facilities.
<b>Functional Category:</b>	Initial Declarations - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Stated Function:</b>	Report annually activity for individual Schedule 3 chemicals and facilities.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Secure international communications capability
<b>Implied Function:</b>	Collect and compile data on Schedule 3 chemicals and production facilities.
<b>Functional Category:</b>	Initial Declarations - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Chemical industry/production expertise Database management Regulatory authority

2. *A State Party shall notify the Technical Secretariat of the name and location of any facility which intends, in the calendar year following submission of the Annual Declaration, to produce, process or consume any of the chemicals listed in Schedule 3 above 30 tonnes."*

<b>Stated Function:</b>	Give advance notification of anticipated Schedule 3 chemical activity.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to pertinent information
 <b>Implied Function:</b>	 Collect and compile data on anticipated Schedule 3 chemical activity.
<b>Functional Category:</b>	Reporting and Communications - Compilation
<b>Organizational Capabilities:</b>	Authorized access to pertinent information Chemical industry/production expertise Database management Regulatory authority

2. *Each State Party shall immediately acknowledge receipt of the list of inspectors and inspection assistants, proposed for designation communicated to it. Any Inspector and inspection assistant included in this list shall be regarded as designated unless a State Party, within [30] days 2/ after acknowledgement of receipt of the list declares its non-acceptance.*

2/ *The time period should not be longer than 30 days. Otherwise the obligation to make declarations within 30 days after entry into force and immediately thereafter provide access for inspection cannot be met.*

<b>Stated Function:</b>	Acknowledge receipt of list of inspectors.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Access to International Organization Secure international communications capability

*It shall notify the Technical Secretariat of its objections (and include the reason for the objection) Such objections shall come into effect 30 days after receipt by the Technical Secretariat. The Technical Secretariat shall immediately inform the State Party concerned of the withdrawal of the designation of the Inspector or inspection assistant.*

<b>Stated Function:</b>	Notify Technical Secretariat of acceptance or nonacceptance of inspectors.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Access to International Organization
<b>Implied Function:</b>	Evaluate list of nominated inspectors.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Chemical and CW expertise Inspection support expertise National security expertise

1. *Each State party shall, within (30) days 3/ after acknowledgement of receipt of the list of Inspectors and inspection assistants or of changes thereto and for the purpose of carrying out inspection activities, provide for multiple entry/exit and/or transit visas and other such documents which each Inspector or inspection assistant may need to enter and to remain on the territory of that State Party. These documents shall be valid for at least 24 months from the date of their provision to the Technical Secretariat.*

*3/ The time period should not be longer than 30 days. Otherwise the obligation to make declarations within 30 days after entry into force and immediately thereafter provide access for inspection cannot be met.*

<b>Stated Function:</b>	Provide visas for inspectors.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Visa authority

1. *Each State Party shall designate the points of entry and shall supply the required information to the Technical Secretariat not later than 30 days after the Convention enters into force. 11 These points of entry shall be such that the inspection team can reach any inspection site from at least one point of entry within [12] hours. Locations of points of entry shall be provided to all States Parties by the Technical Secretariat.*

2 *Each State Party may change the points of entry by giving notice of such change to the Technical Secretariat. Changes shall become effective . days after the Technical Secretariat receives such notification to allow appropriate notification to all States Parties.*

*11 In order to ensure that the process of designation of Inspectors and inspection assistants, as well as of points of entry (and departure) function smoothly as from the date of entry into force of the Convention, the idea of the signatories indicating advance acceptance on the basis of a preliminary list drawn up by the preparatory Commission should be considered.*

<b>Stated Function:</b>	Designate points of entry.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Inspection support expertise

*States Parties on whose territory facilities of other States Parties subject to inspection are located shall facilitate the inspection of those facilities and shall provide for the necessary support to enable the inspection team to carry out its tasks in a timely and effective manner.*

5. *In cases where facilities of an inspected State Party are located in the territory of a non-State Party the State Party subject to inspection shall ensure that inspections of those facilities can be carried out in accordance with the provisions of this Protocol. A State Party that has one or more facilities on the territory of a non-State Party shall ensure acceptance by the host State of inspectors and inspection assistants designated to that State Party.*

<b>Stated Function:</b>	Facilitate and provide support for inspections of all designated facilities.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Inspection support expertise

1. For inspections pursuant to Article IX and for other inspections where timely travel is not feasible using scheduled commercial transport, an inspection team may need to utilize aircraft owned or chartered by the Technical Secretariat. Within 30 days after entry into force of the Convention, each State Party shall inform the Technical Secretariat of the standing diplomatic clearance number for non-scheduled aircraft transporting inspection teams and equipment necessary for inspection into and out of the territory in which an inspection site is located. Aircraft routings to and from the designated point of entry shall be along established international airways that are agreed upon between the States Parties and the Technical Secretariat as the basis for such diplomatic clearance.

<b>Stated Function:</b>	Inform Technical Secretariat of aircraft diplomatic clearance number.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Inspection support expertise

3. No less than [3] hours prior to the scheduled departure of the inspection team from the last airfield prior to entering the airspace of the country in which the inspection is to take place, the inspected State Party [or host State Party] shall ensure that the flight plan filed in accordance with paragraph 2 of this section is approved so that the inspection team may arrive at the point of entry by the estimated arrival time.

<b>Stated Function:</b>	Ensure filed flight plan is approved.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Inspection support expertise

4. The inspected State Party shall provide parking, security protection, servicing and fuel as required for the aircraft of the inspection team at the point of entry when such aircraft is owned or under charter to the Technical Secretariat. Such aircraft shall not be liable for landing fees, departure tax, and similar charges. The Technical Secretariat shall bear the costs of such fuel, [security] and servicing. 1/

1/ The Technical Secretariat will need to negotiate arrangements for costs of such services.

**Stated Function:**

Make arrangements to receive and service inspection aircraft.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**

Inspection support expertise

Knowledge of aircraft operations

The inspected State Party shall provide or arrange for the amenities necessary for the inspection team such as communication means, interpretation services to the extent necessary for the performance of interviewing and other tasks, transportation, working space, lodging, meals and medical care of the inspection team. In this regard, the inspected State Party shall be reimbursed by the Organization for such costs incurred by the inspection team (details to be developed).

**Stated Function:**

Provide amenities and services for inspectors during routine inspections.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**

Diplomatic expertise

Inspection support expertise

Specific knowledge of facility

3. The inspected State Party shall have the right, without prejudice to the prescribed time frames to inspect the equipment in the presence of inspection team members at the point of entry, i.e., to check the identity of the equipment brought in or removed from the territory of the inspected State Party or host State. To facilitate such identification, the technical Secretariat shall attach documents and devices to authenticate its designation and approval of the equipment. The inspection of the equipment shall also ascertain to the satisfaction of the inspected State Party that the equipment meets the description of the approved equipment for the particular type of inspection. The inspected State Party may exclude equipment not meeting that description or equipment without the above-mentioned authentication documents and devices. [Excluded equipment shall be kept at the point of entry until the inspection team leaves the respective State. Storage of the inspection team's equipment and supplies at the point of entry shall be in tamper-indicating containers provided by the inspection team within a secure facility provided by the inspected State Party. Access to each secure facility shall be controlled by a "dual key" system requiring the presence of both the inspected party and representative of the inspection team to gain access to the equipment and supplies. The Technical Secretariat may allow a State Party to maintain equipment storage as described here in lieu of bringing it in for each inspection in accordance with the agreement between the State Party concerned and the Technical Secretariat.]

<b>Stated Function:</b>	Inspect inspection equipment at Point of Entry.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Inspection support expertise Knowledge of equipment On-site verification expertise
<b>Stated Function:</b>	Exclude (not exclude) inspection equipment.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Diplomatic expertise Inspection support expertise Knowledge of equipment On-site verification expertise

3. *The inspected State Party shall within [one] hour acknowledge the receipt of a notification by the Technical Secretariat of an intention to conduct an inspection.*

<b>Stated Function:</b>	Acknowledge receipt of notification of inspection.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Access to International Organization Secure international communications capability
<b>Implied Function:</b>	Notify facility of inspection.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Access to all affected facilities

1. *The State Party [or host State Party] which has been notified of the arrival of an inspection team, shall ensure its immediate entry into the territory and shall through an in-country escort (if such an escort is requested) do everything in its power to ensure the safe conduct of the inspection team and its equipment and supplies, from its point of entry to the inspection site(s) and to its point of exit.*

<b>Stated Function:</b>	Ensure immediate entry and safe conduct of inspection team.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Diplomatic expertise Inspection support expertise

2. In accordance with paragraphs 4 and 5 of Section IV A. above the inspected State Party [or host State Party] shall ensure that the inspection team is able to reach the inspection site within [12] 1/ hours from the arrival at the point of entry or, if appropriate, from the time the inspection site is specified at the point of entry. 2/

1/ Further study is required on whether a longer or shorter time period is feasible.

2/ The view was expressed that because the specific point of entry utilized as well as the time of arrival would be selected by the Technical Secretariat and to avoid prematurely revealing the site during some types of inspections the closest point of entry may not be chosen, the inspected State party could not be held responsible for ensuring that the inspection team reaches the site within a specified time frame, although it should undertake to avoid the use of delaying tactics.

<b>Stated Function:</b>	Ensure timely and safe conduct of inspection team and supplies to the inspection site.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Inspection support expertise

Upon arrival at the inspection site and prior to the commencement of the inspection, the inspection team shall be briefed, with the aid of maps and other documentation as appropriate, by facility representatives on the facility, the activities carried out there, safety measures and administrative and logistic arrangements necessary for the inspection. The time spent for the briefing shall be limited to the minimum necessary and in any event not exceeding three hours.

<b>Stated Function:</b>	Brief inspection team.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Inspection support expertise Specific knowledge of facility

*Inspectors shall have the right throughout the in-country period to communications with the Headquarters of the Technical Secretariat. For this purpose they [may use their own, duly certified, approved equipment and/or] may request that the inspected State Party or host State Party provide them with access to other telecommunications. 6/*

6/

*The issue of communications requires further consideration.*

**Stated Function:**

Provide access to telecommunications.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**Access to telecommunications  
Inspection support expertise

oo

2. *Inspectors shall have the right to interview any facility personnel in the presence of representatives of the inspected State Party with the purpose of establishing relevant facts. Inspectors shall only request information and data which are necessary to the conduct of the inspection, and the inspected State Party shall furnish such information upon request. The inspected State Party shall have the right to object to questions posed to the facility personnel if those questions are deemed not relevant to the inspection. If the inspection team chief objects and states their relevance, the questions shall be provided in writing to the Inspected Party for reply. The inspection team may note any refusal to permit interviews or to allow questions to be answered and any explanations given, in that part of the Inspection Report that deals with the cooperation of the Inspected State Party.*

**Stated Function:**

Furnish requested data and answer inspectors' questions.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**Inspection support expertise  
Specific knowledge of facility

4. *Inspectors shall have the right to have photographs taken at their request by representatives of the inspected State Party. The capability to take instant development photographic prints shall be available.*

<b>Stated Function:</b>	Provide instant photographic services.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Access to instant photographic equipment Inspection support expertise

5. *The inspected State Party shall have the right to accompany the inspection team at all times during the inspection and observe all their verification activities.*

<b>Stated Function:</b>	Accompany inspection team at all times.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Inspection support expertise

6. *The inspected State Party shall receive copies, at its request, of the information and data gathered about its facility(ies) by the Technical Secretariat.*

<b>Implied Function:</b>	Request copies of information gathered during inspection.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Inspection support expertise

1. Except as provided for in parts III and IV of this Protocol representatives of the inspected State Party or of the inspected facility shall take samples at the request of the inspection team in the presence of inspectors. If so agreed in advance with the representatives of the inspected State Party or of the inspected facility the inspection team may take samples themselves.
2. Where possible, the analysis of samples shall be performed on-site. The inspection team shall have the right to perform on-site analysis of samples using approved equipment brought by them. At the request of the Inspection Team, the inspected State Party shall, in accordance with agreed procedures, provide assistance for the analysis of samples on-site.

<b>Stated Function:</b>	Take samples and assist in their analysis on-site.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical expertise Inspection support expertise Knowledge of national safety and emissions standards Regulatory authority
<b>Stated Function:</b>	Provide sampling and analysis equipment as per facility agreement.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical industry/production expertise, Specific knowledge of facility

oo

1. Upon completion of an inspection the inspection team shall meet with representatives of the inspected State Party and the personnel responsible for the inspection site to review the preliminary findings of the inspection team and to clarify any ambiguities. The inspection team shall provide to the representatives of the inspected State Party its preliminary findings in written form according to a standardized format together with a list of any samples and copies of written information and data gathered and other material to be taken off site. <sup>2/</sup> The document shall be signed by the head of the inspection team. In order to indicate that he has taken notice of the contents of the document the representative of the inspected State Party shall countersign the document. This meeting shall be completed within [4] [24] hours of the completion of the inspection.

<sup>2/</sup> A view was expressed that for routine inspection the question of off-site transfer of "copies of written information and data gathered and other material" needs further examination, in particular as regards the confidentiality aspect.

<b>Stated Function:</b>	Countersign inspection findings document.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	On-site verification expertise Specific knowledge of facility

2. The final report shall immediately be submitted to the inspected State Party. Any written comments, which the inspected State Party may immediately make on its findings shall be annexed to it. The final report together with annexed comments made by the inspected State Party shall be submitted to the Director-General of the Technical Secretariat not later than [30] days after the inspection.

**Stated Function:**

Annex comments to final inspection findings document.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**

Inspection support expertise

Specific knowledge of facility

2. States Parties shall ensure that the verification of declarations and the initiation of the systematic monitoring can be accomplished by the Technical Secretariat at all facilities within the agreed time frames after the Convention enters into force. *4/*

*4/* Procedures to ensure the implementation of the verification scheme within designated time frames are to be developed.

**Stated Function:**

Ensure timely verification of declarations and implementation of monitoring.

**Functional Category:**

Monitoring Support

**Organizational Capabilities:**

Chemical industry/production expertise

Executive authority

Inspection support expertise

On-site verification expertise

Regulatory authority

3. Each State Party shall conclude a facility agreement with the Organization for each facility declared and subject to on-site inspection pursuant to Articles IV, V and the Annexes 1 and 2 of Article VI. These agreements shall be completed within months after the Convention enters into force for the State or after the facility has been declared for the first time. They shall be based on models for such agreements and provide for detailed arrangements which shall govern inspections at each facility. *5/ 6/* The Model Agreement shall include provisions to take into account future technological developments.

*5/* A view was expressed that the areas to which inspectors have access at the inspected facility shall be clearly defined in the facility agreement.

*6/* It was suggested that with respect to Article VI verification a step-by-step approach should be introduced where appropriate.

<b>Stated Function:</b>	Conclude facility agreements with the Organization.
<b>Functional Category:</b>	Facility Agreements
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise Executive authority Regulatory authority Specific knowledge of facility

1. Where applicable, the Technical Secretariat shall have the right to install and use continuous monitoring instruments and systems and seals in conformity with the relevant provisions in the Convention and the facility agreements between States Parties and the Technical Secretariat. Such installation shall take place in the presence of the representatives of the inspected State Party.

<b>Stated Function:</b>	Monitor installation of continuous monitoring instruments, systems, and seals.
<b>Functional Category:</b>	Monitoring Support
<b>Organizational Capabilities:</b>	Inspection support expertise Knowledge of tags and seals On-site verification expertise

2. The inspected State Party shall, in accordance with agreed procedures, have the right to inspect any instrument used or installed by the Inspection Team and to have it tested in the presence of representatives of the inspected State Party.

<b>Stated Function:</b>	Inspect and test inspection instruments at site.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	On-site verification expertise

5. The inspected State Party shall provide the necessary preparation and support for the establishment of continuous monitoring instruments and systems and, to this end, shall, at the request of and at the expense of the Technical Secretariat provide:

- (i) All necessary utilities for the construction and operation of the monitoring instruments and systems, such as electrical power and heating;
- (ii) Basic construction materials;
- (iii) Any site preparation necessary to accommodate the installation of continuously operating systems for monitoring;
- (iv) Transportation for necessary installation tools, materials and equipment from the point of entry to the inspection site.

<b>Stated Function:</b>	Assist in the installation of continuous monitoring equipment.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Knowledge of equipment On-site verification expertise Specific knowledge of facility

9. Seals placed by inspectors and monitoring devices shall only be removed in the presence of inspectors. If an extraordinary event requires the opening of a seal, or the removal of a monitoring device when an inspector is not present, the State Party shall immediately notify the Technical Secretariat. Inspectors shall as soon as possible check that no prohibited or unauthorized activities have occurred at the facilities and replace the seal or monitoring device.

10. The State Party shall immediately notify the Technical Secretariat if an event at a facility subject to systematic international monitoring occurs, or may occur, which may have an impact on the monitoring system. The State Party shall coordinate subsequent actions with the Technical Secretariat with a view to restoring the operation of the monitoring system and establishing interim measures, if necessary, as soon as possible.

<b>Stated Function:</b>	Notify Technical Secretariat if extraordinary event requires opening of seal or removal or modification of monitoring device.
<b>Functional Category:</b>	Operating Functions - Reporting
<b>Organizational Capabilities:</b>	Authorized access to CW and related facilities Regulatory authority Secure international communications capability
<b>Stated Function:</b>	Monitor facilities for extraordinary events which may impact monitoring systems.
<b>Functional Category:</b>	Monitoring Support
<b>Organizational Capabilities:</b>	Authorized access to CW and related facilities Knowledge of equipment

oo

2. The inspection site shall be designated by the requesting State Party as specifically as possible by providing a site diagram related to a reference point with geographic coordinates specified to the nearest second if possible. If possible, the requesting State party shall also provide a map with a general indication of the inspection site and a diagram specifying precisely the boundaries to be inspected.

<b>Stated Function:</b>	Provide map with precise boundaries of inspection site.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Specific knowledge of facility

2. If the requested perimeter is acceptable to the inspected State Party, it shall be designated as the final perimeter as early as possible but in no case later than [12] [60] [72] hours after [specification of the location of the inspection site] [the arrival of the inspection teams at the point of entry]. The inspected State Party shall transport the inspection team to the final perimeter of the inspection site. Such transportation shall be accomplished as soon as practicable, and shall take [in any case not more than 12 hours] [normally no more than 24 hours] after agreement on the perimeter.

<b>Stated Function:</b>	Transport inspection team to final perimeter of inspection site.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Specific knowledge of facility

1. At the point of entry, if the inspected State Party cannot accept the requested perimeter, it shall propose an alternative perimeter as soon as possible, but in any case not later than [12] [60] [72] hours after [specification of the location of the inspection site] [the arrival of the inspection team at the point of entry]. Differences shall be negotiated between the inspected State Party and the inspection team with the aim of reaching agreement on a final perimeter.

<b>Stated Function:</b>	Negotiate alternative site perimeter if necessary.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise Specific knowledge of facility

4. If a final perimeter is not readily agreed, the perimeter negotiations at the point of entry shall be concluded as early as possible, but in no case shall the continue for more than [112] [60] [72] hours after [specification of the site by the requesting State Party] [the arrival of the inspection team at the point of entry]. If no agreement is reached at the point of entry, the inspected State Party shall transport the inspection team to a location at the alternative perimeter as soon as practicable. [but in any case] [and normally] shall ensure their arrival at the location no later than [12] [24] hours after the expiration of the time period for the perimeter negotiations.

Stated Function:	Transport inspection team to alternative perimeter.
Functional Category:	Escort
Organizational Capabilities:	Specific knowledge of facility

5. Once at the location, the inspected State Party shall provide the inspection team with prompt access to the alternative perimeter to facilitate negotiations and agreement on the final perimeter and access within the final perimeter.

Stated Function:	Provide prompt access to alternative perimeter.
Functional Category:	Escort
Organizational Capabilities:	Inspection support expertise Regulatory authority Specific knowledge of facility

*To help establish that the site to which the inspection team has been transported corresponds to the site specified by the requesting State Party the inspection team shall have the right to use location-finding equipment and have such equipment and other approved equipment installed according to its directions. The inspection team may [verify their location by reference to] [also visit] local landmarks identified from maps. The inspected State Party shall assist them in this task.*

**Stated Function:**

Assist inspection team in verifying site location.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**

Specific knowledge of facility

oo

*{1/ No later than 24 hours after [specification of the location of the challenged site] [the arrival of the inspection team at the point of entry], the inspected State party must identify all exit points for all land, air, and water vehicles from the requested perimeter and provide the inspection team with evidence of all vehicular exit activity from the requested perimeter.]*

**Stated Function:**

Identify exit points and evidence of vehicular exit activity from inspection site perimeter.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**

Specific knowledge of facility

1. *To facilitate development of an inspection plan, the inspected State Party shall provide a safety and logistical briefing to the inspection team prior to access.*

**Stated Function:**

Provide safety and logistical briefing to inspection team.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**

Specific knowledge of facility

oo

1. *The pre-inspection briefing shall be held in accordance with part I, section V. C. In the course of the pre-inspection briefing, the inspected State Party may indicate to the inspection team the equipment, documentation or areas it considers sensitive and not related to the purposes of the inspection. Additionally, personnel responsible for the site will brief the team on the physical layout and other relevant characteristics of the site; the team shall be provided with a map or sketch drawn to scale showing all the structures and significant geographic features at the site. The team shall also be briefed on availability of facility personnel and records.*

**Stated Function:**

Conduct pre-inspection briefing.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**Experience with handling classified/confidential documents, CBI, and national security information  
Specific knowledge of facility

1. *The inspected State Party shall provide access within the requested perimeter as soon as possible, but in any case no later than [72] [168] [192] hours after [specification of the location of the inspection site] [the arrival of the inspection team at the point of entry] in order to clarify the [suspicion of non-compliance] [concern regarding compliance] with the Convention raised in the inspection request.*

**Stated Function:**

Provide inspection team access within requested perimeter.

**Functional Category:**

Escort

**Organizational Capabilities:**Inspection support expertise  
Regulatory authority  
Specific knowledge of facility

[3] *The inspected State Party shall designate the perimeter entry/exit points and the inspection team and the inspected State Party shall negotiate: the extent of access to any particular place or places within the final and requested perimeters as provided in Section III.B, paragraphs 4-7 below; the particular inspection activities to be conducted by the inspection team; the performance of particular activities by the inspected State Party; and the provision of particular information by the inspected State Party.]*

**Stated Function:**

Negotiate inspection team activities.

**Functional Category:**

General Inspection Support

**Organizational Capabilities:**Diplomatic expertise  
Inspection support expertise  
Regulatory authority  
Specific knowledge of facility

4. The inspected State Party shall [make every reasonable effort to] demonstrate to the inspection team that any object, building, structure, container or vehicle to which the inspection team has not had full access [or to which access has been denied], is not used to an activity giving rise to concern regarding compliance with the Convention.

<b>Stated Function:</b>	Satisfy compliance concerns regarding areas, structures, containers, or vehicles to which access has been denied or restricted.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Inspection support expertise Specific knowledge of facility

5. In conformity with the relevant provisions in the Annex on the protection of confidential information the inspected State Party shall have the right to take measures to protect sensitive installations and prevent disclosure of confidential data not related to chemical weapons. Such measures may include: *inter alia*:

- removal of sensitive papers from office spaces and securing them in safes
- shrouding of sensitive displays, stores, and equipment that cannot be secured in safes
- shrouding of sensitive pieces of equipment, such as computer or electronic systems
- logging off of computer systems and turning off of data indicating devices
- restriction of sample analysis to appropriate element-specific on-site test except where suitable facilities are not provided;]
- random selective access whereby the inspectors are requested to select a given percentage or number of buildings of their choice to inspect; the same principle can apply to the interior and content of sensitive buildings;
- giving exceptionally only individual inspectors access to certain parts of the inspection site.

6. The inspected State shall demonstrate to the inspection team that any part of the inspection site protected in accordance with paragraph B.5. above has no relation to the concern raised in the inspection request.

Furthermore, it shall be the responsibility of the inspected party to satisfy the inspectors that a hazardous area, structure, container, or vehicle has not been designed, constructed, or used for the suspected activity stipulated in the inspection request. If the inspected party demonstrates to the satisfaction of the inspection team by means of a visual inspection of the interior of an enclosed space from its entrance that the enclosed space does not contain any items designed, constructed, or used for the stipulated suspect activity, then such an enclosed space shall not be subject to further inspection.

<b>Stated Function:</b>	Take measures to protect sensitive or confidential installations and data and satisfy inspectors as to the legitimacy of measures taken.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Diplomatic expertise Experience with handling classified/confidential documents, CBI, and national security information, Specific knowledge of facility
<b>Implied Function:</b>	Provide consultation to facilities management regarding protection of sensitive equipment, installations, data.
<b>Functional Category:</b>	Security
<b>Organizational Capabilities:</b>	Experience with handling classified/confidential documents, CBI, and national security information

*- Use of tamper-evident sensor suites specifically designed to detect relevant chemicals a developed and approved by States Parties in accordance with the Convention. At the option of the inspected State Party, such sensor suites could be used - either by members of the inspection team or remotely - as the aerial or surface access permitted by the inspected State Party.]*

*1/ There is a proposal to delete this paragraph: the possible options voiced by managed access ought not to be reduced *a priori*.*

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<b>Stated Function:</b>	Approve tamper-evident sensor suites, as necessary.
<b>Functional Category:</b>	Monitoring Support
<b>Organizational Capabilities:</b>	Knowledge of sensor suites

*{9. For facilities declared under Article III, paragraph 1 (c), if access is restricted or denied to areas or structure not related to chemical weapons, using procedures in paragraph 4 and 5 in this section, the inspected State Party shall make every reasonable effort to satisfy the compliance concern.]*

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<b>Stated Function:</b>	Satisfy compliance concerns regarding areas or structure to which access has been denied or restricted.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Inspection support expertise Specific knowledge of facility

C. *Observer(s) 21*

1. Pursuant to the provisions of Article IX, the requesting State Party shall liaise with the Technical Secretariat to coordinate the arrival of its observer(s) at the same point of entry as the inspection team within a reasonable period of the inspection team's arrival.

*21* Views were expressed that the question of whether an observer is required is not yet solved. In case there will be an agreement on this issue, these provisions need further elaboration.

<b>Stated Function:</b>	Liaise with Technical Secretariat to coordinate observer's(s') arrival.
<b>Functional Category:</b>	Escort
<b>Organizational Capabilities:</b>	Inspection support expertise

4. Throughout the in-country period, the inspected State Party shall provide or arrange for the amenities necessary for the observer(s) such as communication means, interpretation services, transportation, working space, lodging, meals and medical care. All the costs in connection with the stay of the observer(s) on the territory of the inspected State Party or the host State shall be borne by the requesting State Party.

<b>Stated Function:</b>	Provide amenities and services for inspectors during challenge inspections in U.S.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Inspection support expertise Specific knowledge of facility
<b>Stated Function:</b>	Reimburse costs of U.S. observers on challenge inspections in other countries.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Accounting Executive authority

**[E. Extension of inspection site. ]**

If the inspection team considers it necessary, for the purpose of the inspection, to visit any other contiguous location outside the boundaries of the inspection site as originally specified by the requesting State Party, the inspection team leader shall formally submit a written request to the inspected State Party [through the in-country escort]. Within two hours of the submission of the request the inspected State Party shall formally respond in writing to the request [through the in-country escort]. The requesting State Party of the observer[s] of the requesting State Party shall promptly be informed by the inspection team of the request of the inspection team leader and the response to it by the inspected State Party. If the response is negative, the requesting State Party may [through its observer] modify its original request to include the additional contiguous location. Once such a modified request has been formally submitted to the [Director-General of the Technical Secretariat] [the in-country escort], the additional contiguous location shall be subject to inspection by the team within ... hours.

**[U] The procedures in this paragraph need further consideration based on the managed access approach outline in CD/CW/WP.352.**

<b>Stated Function:</b>	Respond to inspection team request to visit locations outside boundary of inspection site.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical Weapons Convention expertise Regulatory authority Specific knowledge of facility and local area

oo

**[I. At the inspected State Party's request, the clothing and equipment shall be left at the site. The inspected State Party shall reimburse the Technical Secretariat for the cost of any clothing and equipment left by the inspection team.**

<b>Stated Function:</b>	Reimburse Technical Secretariat for cost of inspection team clothing and equipment.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Executive authority

1. The inspection team shall have the right to collect samples, of types and in quantities it considers necessary. If the inspection team deems it necessary, and if so requested by it, the inspected State Party shall assist in the collection of samples under the supervision of inspector(s) or inspection assistant(s). The inspected State Party shall also permit and cooperate in the collection of appropriate control samples from areas neighboring the site of the alleged use and from other areas as requested by the inspection team.

<b>Stated Function:</b>	Assist in the collection of samples during inspections associated with alleged use.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Chemical industry/production expertise Inspection support expertise Knowledge of national safety and emissions standards Regulatory authority Specific knowledge of facility

E. Interviews

... The inspection team shall have access to medical histories, if available, and be permitted to participate in autopsies as appropriate of the persons who may have been affected by the alleged use of chemical weapons.

<b>Stated Function:</b>	Provide access to medical histories and hospitals in situations of alleged use.
<b>Functional Category:</b>	General Inspection Support
<b>Organizational Capabilities:</b>	Access to medical facilities Access to medical histories Regulatory authority

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## Appendix A

### Hypersonic Interceptor Mission Profile Analysis:

A hypersonic interceptor mission profile analysis was performed to establish a range versus vehicle sizing for fuel requirement. The nominal mission profile of hypersonic interceptor has been defined as to intercept an approaching target at 1500 nm from a CONUS base within an 1/2 hour of take-off.

The base-line vehicle configuration is shown in Fig. 2-5. The vehicle specifications are given in Table A1. The Variable Cycle Hyper Jet (VCHJ) Turbofan/Ramjet engine using a MCH (endothermic) fuel was selected to power the baseline interceptor. Advantage of the MCH fuel is that a high volumetric efficiency can be achieved and the current state of art fuel tank design can be applied. However, it will restrict the maximum operational speed to Mach = 5 as compared to the cryogenic fuel engines using LH2 or methane. Also the lower heat content lowers the specific impulse (and hence increases the specific fuel consumption).

The advantage of LH2 engine is to provide a lowest GTOW vehicle or a maximum deliverable payload for the same GTOW vehicle and provides an efficient actively cooled insulation system. However, the disadvantage is that a volumetric size of vehicle becomes greatest due to the low fuel density, approximately 1/10 of the conventional fuel, which may result in a higher drag vehicle. In addition, the cryogenic temperature tank design requires a large amount of insulation materials and complex design technology.

Table A1. M=5 Hypersonic Interceptor

GTOW = 200000 lb.  
Reference Area = 2400 sq. ft.  
3 GE VCHJ Turbofan/Ramjet engines:  
MCH (endothermic fuel): Heat content = 18642 BTU/lb.  
SL static thrust = 51740 lb/engine  
Air mass-flux = 400 pps/engine  
Turbofan power operation:  $0 \leq M \leq 3.2$   
Ramjet operation:  $3.2 \leq M \leq 5.0$   
Operational altitude = 85000 to 95000 ft.

(The engine performance data are discussed under PT4.)

The aerodynamic data used in the analysis are presented in Table A2. The hypersonic data were generated by the Supersonic/Hypersonic Arbitrary Body Program (SHABP). The subsonic and supersonic data were derived from the similar configuration presented in the GD report (AFWAL-TR-85-3105, Volume 1, Geometric Optimums for Transatmospheric Military Vehicles, TAV-BG-RJ-1C). The lift curve is quadratically fitted to account for the hypersonic lift curve non-linearity. The lift and drag coefficients are defined by the following equations (Eq. (A1)-(A2)) and Table A2 data.

$$Cl = Clo + (Cla + Cl2a \times \alpha) \times \alpha \quad (A1)$$

$$Cd = Cdo + K \times Cl \times Cl \quad (A2)$$

Table A2. M=5 Hypersonic Interceptor Aerodynamic Data

Mach No.	Cl <sub>0</sub>	Cl <sub>a</sub>	Cl <sub>2a</sub>	Cd <sub>0</sub>	K
0.0	0.070000	0.02650	0.00000	0.02000	0.8000
0.8	0.070000	0.02650	0.00000	0.02000	0.8000
0.9	0.060000	0.03050	0.00000	0.02500	0.8000
1.1	0.060000	0.03050	0.00000	0.02200	0.8000
3.0	-0.012000	0.00745	0.00040	0.01098	1.3030
4.0	-0.01191	0.00618	0.00040	0.01062	1.4660
6.0	-0.01102	0.00490	0.00040	0.01000	1.7385

The maximum lift-over-drag ratio,  $(L/D)_{max}$ , at which the vehicle is desired to cruise to maximize the range can be determined by the following equations (Eq. (A3) to (A6)) for the Table A2 data.

$$Cl* = (Cdo/K)^{0.5} \quad \dots \text{lift coefficient for } (L/D)_{max} \quad (A3)$$

$$Cd* = Cdo + K \times Cl*^2 \quad \dots \text{drag coefficient for } (L/D)_{max} \quad (A4)$$

$$(L/D)_{max} = Cl*/Cd* \quad (A5)$$

The corresponding angle of attack is

$$\alpha* = .5 \times \{-Cla + [Cla^2 + 4 \times Cl2a \times (Cl* - Clo)]^{0.5}\} / Cl2a \quad (A6)$$

#### Base-line Hypersonic Interceptor Mission Profile:

The base-line vehicle is defined as Mach=5 interceptor (GTOW=200000 lb.) having an operational down-range capability of 1500 nm with 110000 lb. of MCH (endothermic) fuel. Due to the energy management point of view, the hypersonic interceptor is envisioned as a hit-and-run type vehicle and is not designed to engage a low-speed dog-fight, because the reacceleration to hypersonic escape speed after the low-speed engagement requires a greater amount of fuel than the hypersonic turn maneuver for escape. It is considered that the target interception in a minimum time is essential and return trip performance after leaving the hostile region can be relaxed for fuel efficiency.

The hypersonic interceptor mission profile is simulated by the Unified Three-dimensional Trajectory Simulation Methodology. The trajectory is constructed by the several operational phases consisting of horizontal take-off, acceleration and climb, hypersonic cruise to target, hypersonic turn, return cruise, deceleration and descent. The trajectory calculation is based on a spherical rotating earth, which induces a lateral trajectory deviation from the reference plane (taken along a specified great circle) due to the Coriolis acceleration. The launch point is selected on a latitude position of 30 degrees north (somewhere on the CONUS) and the zero longitude. A reference flight path inclination of 50 degrees is arbitrarily chosen to simulate a target interception in the north-east direction. Note, that the latitude position and trajectory inclination play the key roles

in establishing the intercept trajectory. However, the longitude is arbitrary and it can be always rotated to any desired position without affecting the final results.

The simulated altitude versus Mach number corridor of a typical hypersonic interceptor is shown in Fig. A1. The hypersonic cruise and target interception, turn and return trip are performed at M=5 and 85000 to 90000 ft. altitude.

#### Mission Profile Histories:

The typical altitude and velocity histories are presented in Fig. A2. The end of cruise for target interception is reached in 1890 sec. from the take-off run. The turning maneuver requires approximately 670 sec. The point of target interception can be made during the turn. Approximately 2300 sec. may be expended for the return trip.

The typical vehicle weight history which can be translated to the fuel expenditure history is presented in Fig. A3. As indicated approximately 38 percent of the total fuel is expended during the acceleration and climb (43241/113309). The acceleration/climb portion of flight will be discussed in detail in the later section. For a total mission, approximately 113300 lb. of fuel is used which exceeds the base-line requirements by 3300 lb. However, this vehicle is considered as a base-line vehicle for the present study. The fuel is consumed at an average rate of approximately 80 lb./sec. during the acceleration/climb, 24 lb./sec. during the cruise to target and 27 lb./sec. during the turning maneuver.

For this typical mission, the down-range, cross-range and total-range histories are shown in Fig. A4. The maximum down-range of 1475 nm which is measured along the reference plane is achieved at the apex of the turning maneuver. The Coriolis acceleration due to the earth rotation has induced a cross-range (120 nm) normal to the reference plane. The total range for the interceptor to travel to accomplish the mission is approximately 3100 nm.

The resulting radiation equilibrium temperature history computed on the 2.4 inch nose radius is shown in Fig. A5. For M=5 flight, this curve represents approximately the total temperature history and, therefore, it is used as an indicator for the severity of aeroheating trajectory profile. The dynamic pressure history is also shown in Fig. A5. The peak dynamic pressure of 1700 psf is reached during the acceleration/climb phase. In order to reach an efficient cruise altitude/velocity condition and also to avoid the excessive aeroheating input, it was found that a flight in a constant dynamic pressure corridor can not be performed during the acceleration/ climb maneuver because it requires an end point matching of cruise condition. The cruise dynamic pressure of 700 to 800 psf which provides an equilibrium flight condition in the neighborhood of the  $(L/D)_{max}$  is attained.

The required angle of attack and bank angle histories are shown in Fig. A6. The angle of attack modulation associated with the acceleration/climb phase will be discussed later. The angle of attack (9 to 9.5 degrees) corresponding to the neighborhood of  $(L/D)_{max}$  (9.7 degrees) is maintained during the cruise to target. The angle of attack and bank angle are modulated simultaneously to maintain a constant altitude/velocity turning rate of 0.3 deg/sec. which resulted in approximately 0.8-g turn with a turning radius of approximately 160 nm. A higher turning rate would result in greater fuel expenditure due to a higher angle of attack trim requirement.

#### Mission Profile With Respect To Down-Range Distance:

The mission profiles plotted against a down-range distance are shown in Fig. A7. The altitude and velocity are given in Fig. A7a. For achieving a minimum time intercept, the cruise conditions are reached in approximately 300 nm of the launch point. The maximum down range of 1475 nm is attained as marked in the plot. For a return trip, a deceleration/descent leg is executed approximately 600 nm from the home base.

The cross range versus downrange is shown in Fig. A7b. The effect of Coriolis acceleration due to the earth rotation induces lateral dispersion of the trajectory for a zero bank angle flight. If desired, this effect can be trimmed out with less than a degree bank angle modulation. It appears that, however, this effect has inadvertently introduced a case that a target interception can be made toward the enemy flank normal to the target flight path which may enhance the chance of mission success as compared to a head-on encounter. A heading change of 192 degrees with 0.3 deg/sec. turning rate is executed in 640 sec.

The vehicle weight versus down-range is given in Fig. A7c. Approximately 65 percent of fuel is expended during the outgoing leg of the total mission profile.

#### Acceleration/Climb Performance:

The interceptor has a good take-off performance as shown in Fig. A8. With a sufficient initial thrust to weight ratio (approximately 3/4), the interceptor has accelerated to the take-off velocity of 466 ft/sec. in 20 sec. (Fig. A8a) with a ground run of approximately 0.76nm (4600 ft., Fig. A8b). The interceptor is rotated to angle of attack of 12 degrees for take-off. A constant speed climb is programmed at  $M=0.8$  as the vehicle climbs to 20000. ft altitude.

The acceleration/climb performance profiles are given in Fig. A9 to A11. The altitude and velocity histories with pertinent events data are shown in Fig. A9a. Once the vehicle has attained

a 20000. ft. altitude at  $M=0.82$ , the angle of attack is modulated to follow constant climb rates which was prescribed at the phase switching points. The transonic acceleration to  $M=1.5$  is performed at a climb rate of 98 ft./sec. Between  $M=1.5$  and  $M=3.2$ , the climb rate is increased to 150 ft/sec. At  $M=3.2$  the turbofan power mode is terminated and switched to the ramjet mode.

From this point on to  $M=4.8$ , a climb rate of 220 ft./sec. is used. Because the airbreathing engine thrust and specific impulse (inverse of specific fuel consumption) data are highly non-linear functions of Mach number and altitude and because the aerodynamic coefficients of vehicle are also dependent upon Mach number and angles of attack, the ascent profile is very sensitive to the selected climb rates. Hence, the climb rates must be selected carefully by an iteration process in order to satisfy the fuel efficiency, dynamic pressure loading and aeroheating constraints. For example, a selection of a higher than desired climb rate attains the altitude prematurely with degrading engine performance. As a consequence, the vehicle is unable to accelerate to the required speed. On the other hand, if a shallower climb rate is picked, the acceleration dominates over the climb rate and this may violate the dynamic pressure and aeroheating constraints.

At  $M=4.8$ , an angle of attack modulation algorithm which seeks the altitude and velocity combination for a  $(L/D)_{max}$  cruise condition has been derived and applied. In this scheme, the thrust components and aerodynamic coefficients are functions of angle of attack, therefore, a proper angle of attack must be determined by iteration process. The cruise conditions of a 85000 ft. altitude and  $M=5$  speed are determined for the baseline vehicle (Fig. A9a). This portion of mission is influenced by the terminal conditions prescribed by the end of the acceleration and climb phase at  $M=4.8$  as will be shown later.

The radiation equilibrium temperature (used as an aerodynamic heating indicator) and dynamic pressure history are shown in Fig. A9b. The peak dynamic pressure during the climb is held below 2000 psf which is controlled by the proper selection of climb rates.

The angle of attack modulation history to achieve the foregoing trajectory history during the acceleration and climb phases is shown in Fig. A10a. Because a three-degree-of-freedom trajectory simulation program is used, the angle of attack is instantaneously changed at the phase switching points. The observed angle of attack spikes are computer generated and are necessary in order to adjust the discontinuity in the predefined climb rate changes at the phase switching points. In reality, smoother phase transitions can be achieved and these spikes can be eliminated by robust control system. In between the phase switching points, the angle of attack is modulated accordingly to satisfy the prescribed climb rates. For an energy stand point, a vehicle flight attitude with small angle of attack that minimizes

the drag is desireable during the acceleration and climb. The impact of drag will appear in a reduction of the effective specific impulse as can be seen in Fig. A11b. However, in order to satisfy the over-all mission goal, the climb rate which introduces the end of acceleration angle of attack that matches the desired cruise condition in a neighborhood of  $(L/D)_{max}$  seems to produce an optimal trajectory.

The resulting vehicle weight history during the acceleration and climb is shown in Fig. A10b.

The thrust history is given in Fig. A11a. During the acceleration and climb phases from take-off to  $M=4.8$ , the airbreathing engines are assumed to operate at a 100 percent power setting. In the region of 100 sec. where a constant speed climb is performed, the thrust has decreased as a function of altitude increase. During the turbofan power mode operation between  $M=0.82$  to  $M=3.2$ , the increasing thrust from accelerating flight overcomes the effect of decreasing thrust due to altitude increase. This trend reverses when a greater than desired climb rate is used. A thrust mismatch is noted at  $M=3.2$  where the engine operation has changed to the ramjet mode. The thrust decay in this region is induced by the altitude change. This effect dominates over the acceleration effect. Once the interceptor has attained the cruise altitude and speed, the engines are throttled down to maintain a relatively constant altitude and speed flight during the cruise phases.

The importance of energy efficiency can be observed in the specific impulse ( $I_{sp}$ ) histories shown in Fig. A11b. An average engine  $I_{sp}$  of 1750 sec. is indicated for the turbofan mode operation and 1400 sec. for the ramjet mode between  $M=3.2$  and  $M=4.8$ . An increasing engine  $I_{sp}$  due to the reduced power is noted beyond the  $M=4.8$  point. The fuel consumption during the acceleration and climb phase is determined by a time integration of fuel mass flow rate defined by thrust over  $I_{sp}$  ratio, Eq. (A7).

$$\text{mass flow rate} = \dot{m} = \text{Thrust}/I_{sp}/g \quad (A7)$$

However, the integration time interval depends on the magnitude of the acceleration term for achieving the desired energy level. For example, the acceleration is slower for a vehicle with a larger drag to thrust ratio ( $D/T$ ). The higher drag vehicle consumes a greater amount of fuel to achieve the same energy level. This effect can be observed on the effective  $I_{sp}$  plot as shown in the lower curve of Fig. A11b. The effective  $I_{sp}$  ( $I_{sp}^*$ ) is defined by the product of an engine  $I_{sp}$  and  $(1-D/T)$  term. The effective  $I_{sp}$  is approximately 1/2 to 2/3 of the engine  $I_{sp}$ . The mass fraction is defined by the following equations for achieving the required energy level when two end points of acceleration/climb states are known independent of the integration time interval.

$$\frac{m_f}{m_0} = 1 - \exp\left\{-\int_{E_1}^{E_2} \left[\frac{dE}{(V I_{sp}^*)}\right]\right\} \quad (A8a)$$

$$\frac{m_f}{m_0} = 1 - \exp\{-\Delta E / (V_b \ Isp^*)\} \quad (A8b)$$

where energy altitude =  $E = V^2/2g + h$  (A9)  
and  $V_b$  = average velocity between two end points.

For example, the hypersonic interceptor in this report must attain an energy level equivalent to Mach=4.8 and 80000 ft. altitude from the zero state. The sample energy altitude as computed by Eq. (A9) is:

$$\Delta E = (4800)^2 / 2g + 80000 = 437800 \text{ ft.}$$

Assuming the average  $V_b = 2300 \text{ ft./sec.}$  and the  $Isp^* = 900 \text{ sec.}$  (taken from Fig. A11b), the fuel expenditure during the acceleration/climb to attain the  $\Delta E$  is approximately 38100 lb. using Eq. (A8b). The integrated value from Fig. A3 is 37120 lb., which is very close to the estimated value.

The estimation using Eq. (A8b) can be improved by the following piecewise construction of energy level.

$$\frac{m_f}{m_0} = 1 - \exp\{-\sum_{i=1}^n [\Delta E_i / (V_{b,i} \ Isp^*_{i-1})]\} \quad (A10)$$

where  $E_i = E_i - E_{i-1}$   
 $(V_{b,i} \ Isp^*_{i-1}) = \text{average value between } E_i \text{ and } E_{i-1}$ .

The sensitivity of fuel requirement with respect to the effective  $Isp$  (can be varied by any term of engine  $Isp$ , drag or thrust) during the acceleration/climb can be estimated by Eq. (A8) or Eq. (A10).

### Sensitivity Of Ascent Trajectory With Respect To Climb Rates:

In the course of this study, the determination of acceleration and climb portion of trajectory simulation was found to be quite sensitive to the angle of attack modulation or to the defined climb-rates. The cause of this sensitivity is based on the air-breathing engine performance which is a highly non-linear function of Mach number and altitude (perhaps, also with angle of attack) and aerodynamic coefficients which are also highly dependent upon the Mach number and angles of attack. The proper angle of attack modulation must be determined by an iteration process for a given maneuver, because the aerodynamic coefficients are a direct function of angle of attack, but the thrust components are an implicit function of the angle of attack.

For this portion of the analysis, the climb-rates are predefined in the following speed ranges: (1)  $M=0.82$  to  $1.5$ , (2)  $M=1.5$  to  $3.2$  and (3)  $M=3.2$  to  $4.8$ . In particular, the effects of climb-rate variation only in the first speed range from  $dh/dt=85$  to  $dh/dt=98$  ft./sec. that impact the total ascent profile are investigated. The climb-rates in the second and the third speed ranges are maintained constant for  $dh/dt=150$  and  $dh/dt=220$  ft./sec, respectively. The cruise point insertion maneuver between the speed range of  $M=4.8$  to  $M=5$  is achieved by the angle of attack modulation algorithm which seeks and attains the flight condition in a neighborhood of  $(L/D)_{max}$ .

The altitude histories are compared in Fig. A12a and the relative velocity histories in Fig. A12b. The altitude histories prior to  $M=4.8$  appear invariant, however, the different altitudes are achieved with the same speed as a function of the climb-rate variation in the first speed regime as shown by the connecting lines between Fig. A12a and A12b. The largest altitude correction during the cruise point insertion maneuver is required for the case (1) and the smallest correction for the case (3). The cases are defined in the following table.

Table A3. Cases Based on Climb Rates for MCH Fuel Vehicle

Case	dh/dt (ft/s)		
	.82<M<1.5	1.5<M<3.25	3.25<M<4.8
1	85	150	220
2	90	150	220
3	98	150	220

For Fig. A12 to A15, the legends and symbols for identifying these cases are shown in Fig. A12. The openned symbols indicated a flight trajectory for the vehicle operating with the MCH (exothermic) fuel and the closed symbols for the LH2 fuel.

The stagnation point radiation equilibrium temperature histories that are used as an indicator for the severity of aeroheating comparison are given in Fig. A13a. For the low hypersonic speed regime, the temperature histories represent the near stagnation temperature histories. Since the cruise conditions are identical for all cases, the manner by which the peak temperature is approach is dictated by the climb-rate variation.

The dynamic pressure histories are compared in Fig. A13b. Actually, an operation in a higher dynamic pressure flight corridor is more fuel efficient. However, a combined effect of aeroheating and structure loads will restrict the maximum dynamic pressure profile. The trajectory as defined by case (3) is selected as the nominal ascent trajectory because in this case the peak dynamic pressure of less than 2000 psf. is maintained. The sensitivity of dynamic pressure loading with respect to the climb-rate variation in a single speed regime indicates that further investigation is required to determine if any additional dynamic pressure constraint must be imposed. As discussed before, a large adjustment of a cruise point insertion maneuver is required to match the desired cruise dynamic pressure for the case (1) and (2) as compared to the case (3).

The results of this study imply that a systematic selection of piecewise fitting climb-rates is required to optimize the accelerating ascent trajectory. For the present study, the impact of climb-rate variation only by a single speed regime is demonstrated.

The comparison of vehicle weight change versus down-range is shown in Fig. A14. The climb-rate of case (4) vehicle is the same as for the case (3) vehicle but the range is extended by increasing the cruise time.

A comparison of the latitude-longitude ground track of the simulated missions is shown in Fig. A15. The home base is located at a latitude of 30 degrees somewhere on the CONUS. The trajectory inclination of 50 degrees ( $i_0 = 50$  deg) is arbitrarily selected so that a target interception will occur in the north east direction. The Coriolis acceleration due to the cross-product of the vehicle velocity vector and the earth rotational vector has induced a lateral dispersion of trajectory at the hypersonic cruise speed. The turning radius of approximately 160 nm is required for the heading change. Since the initial longitude location does not contribute to the trajectory simulation, the zero degree longitude is assumed.

#### Performance Comparisons with LH<sub>2</sub> Fuel Interceptor:

For comparison purpose only, typical flight trajectory histories of a M=6 hypersonic interceptor using a LH<sub>2</sub> (liquid hydrogen) fuel are compared in Figures A12 to A15. Since the identical vehicle configuration is used for MCH and LH<sub>2</sub> vehicles, the cruise conditions were readjusted to maintain the equilibrium

flight. The cruise altitude is increased to 100,000 ft for the LH2 fuel vehicle as shown in Fig. A12a. The cruise velocity is for the Mach 6 as noted in Fig. A12b. (Note: the vehicle was not redesigned for LH2 tankage, and this analysis therefore addresses only first order effect.)

A higher peak stagnation point temperature is attained due to the higher cruise velocity which has off-set the altitude effect as shown in Fig. A13a. The dynamic pressure history is compared in Fig. A12b. The lowest dynamic pressure history for the LH2 fuel vehicle as compared to the MCH fuel vehicle is coincident and consistent with Fig. A12.

The pronounced effect of the LH2 fuel vehicle appears in the plot of vehicle weight versus down-range as shown in Fig. A14. Because the heat content per weight of the LH2 fuel is almost 3 times that of the MCH fuel and because the LH2 fuel vehicle cruises at  $M=6$  instead of  $M=5$ , the range capability of the LH2 fuel vehicle has improved and less fuel in the term of weight is consumed. Hence the mass ratio at the end of the mission is significantly improved ( $m/m_0 = 0.64$  for LH2 and 0.42 for MCH), provided the same geometrically sized vehicle is used. Unfortunately, the fuel density of the LH2 is almost 1/10 of the MCH fuel, the volumetric requirement of the LH2 vehicle will be substantially greater for the same GTOW vehicle. The final trade study including the material and fabrication technologies and logistic considerations must be made to determine the merit of the LH2 fuel vehicle in the present speed regime. However, it is inevitable that any hypersonic vehicle with Mach number greater than 5 must require the LH2 fuel engine.

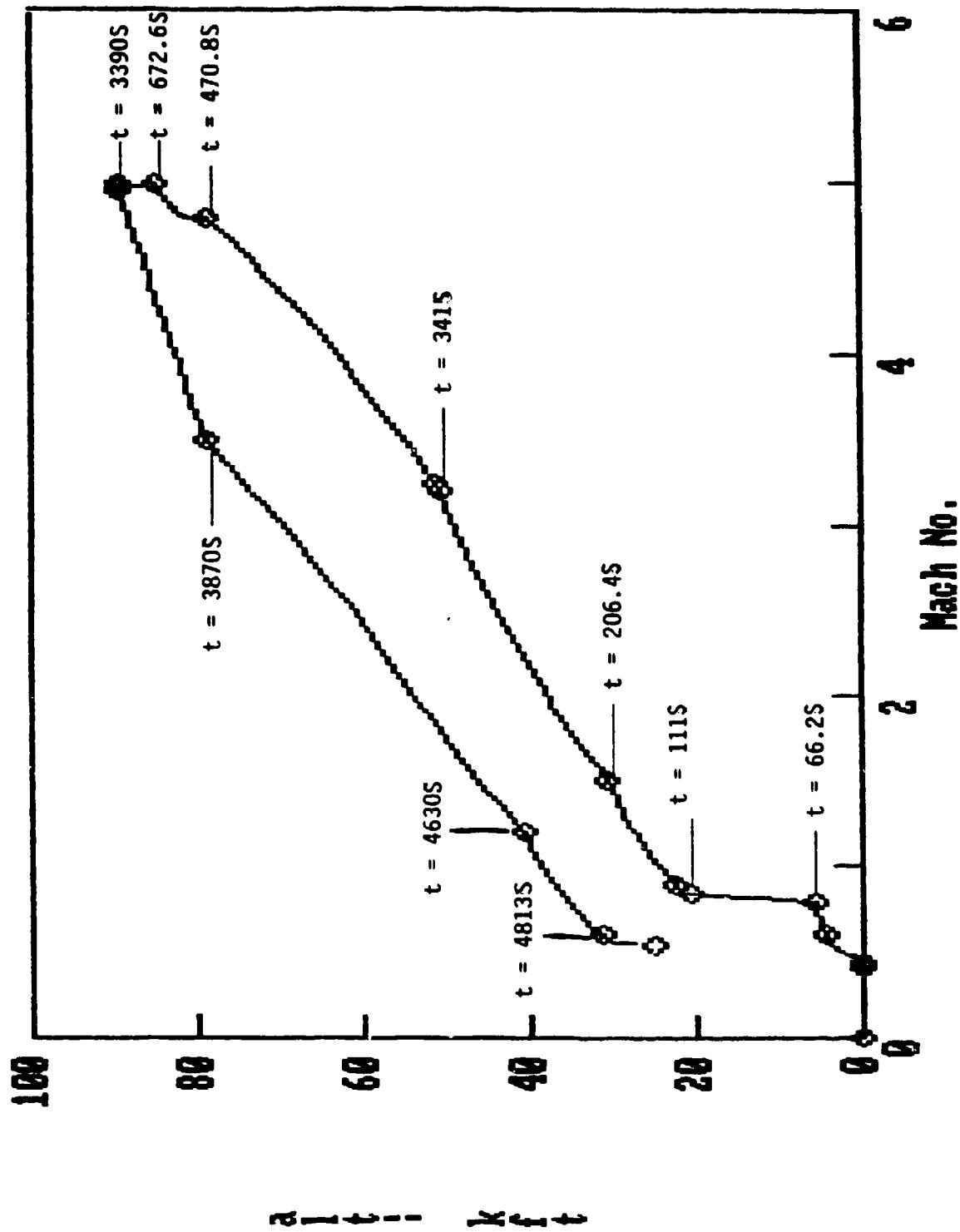


FIGURE A1. TYPICAL HYPERSONIC INTERCEPTOR ( $M_{\infty} = 5$ ,  $M_{CH}$  FUEL) ALTITUDE - MACH NUMBER PROFILE, BASELINE CASE ( $dh/dt = 98/150/220$ )

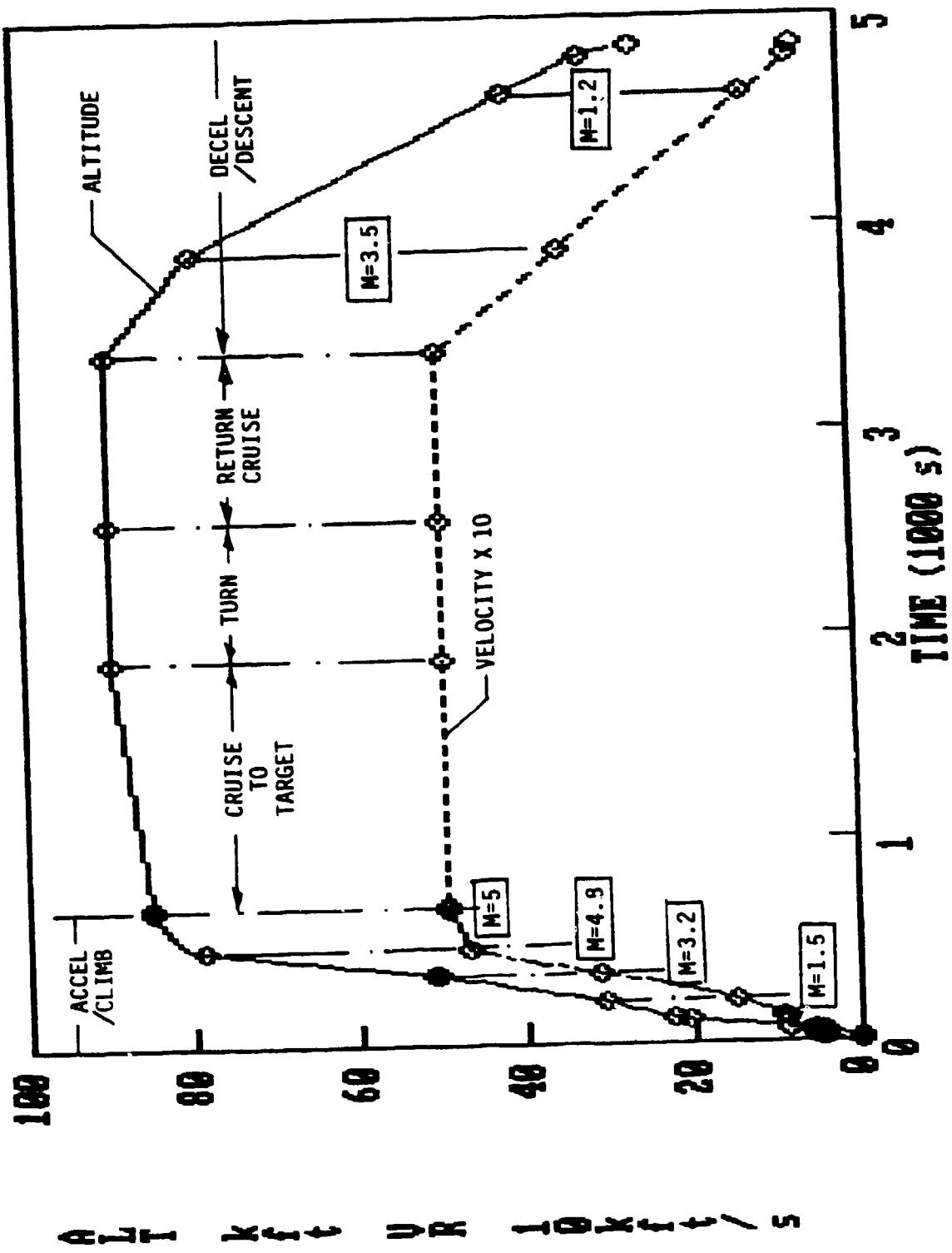


FIGURE A2. TYPICAL HYPERSONIC INTERCEPTOR ( $M_{\infty} = 5$ , MCH FUEL) MISSION PROFILE: ALTITUDE AND RELATIVE VELOCITY HISTORIES

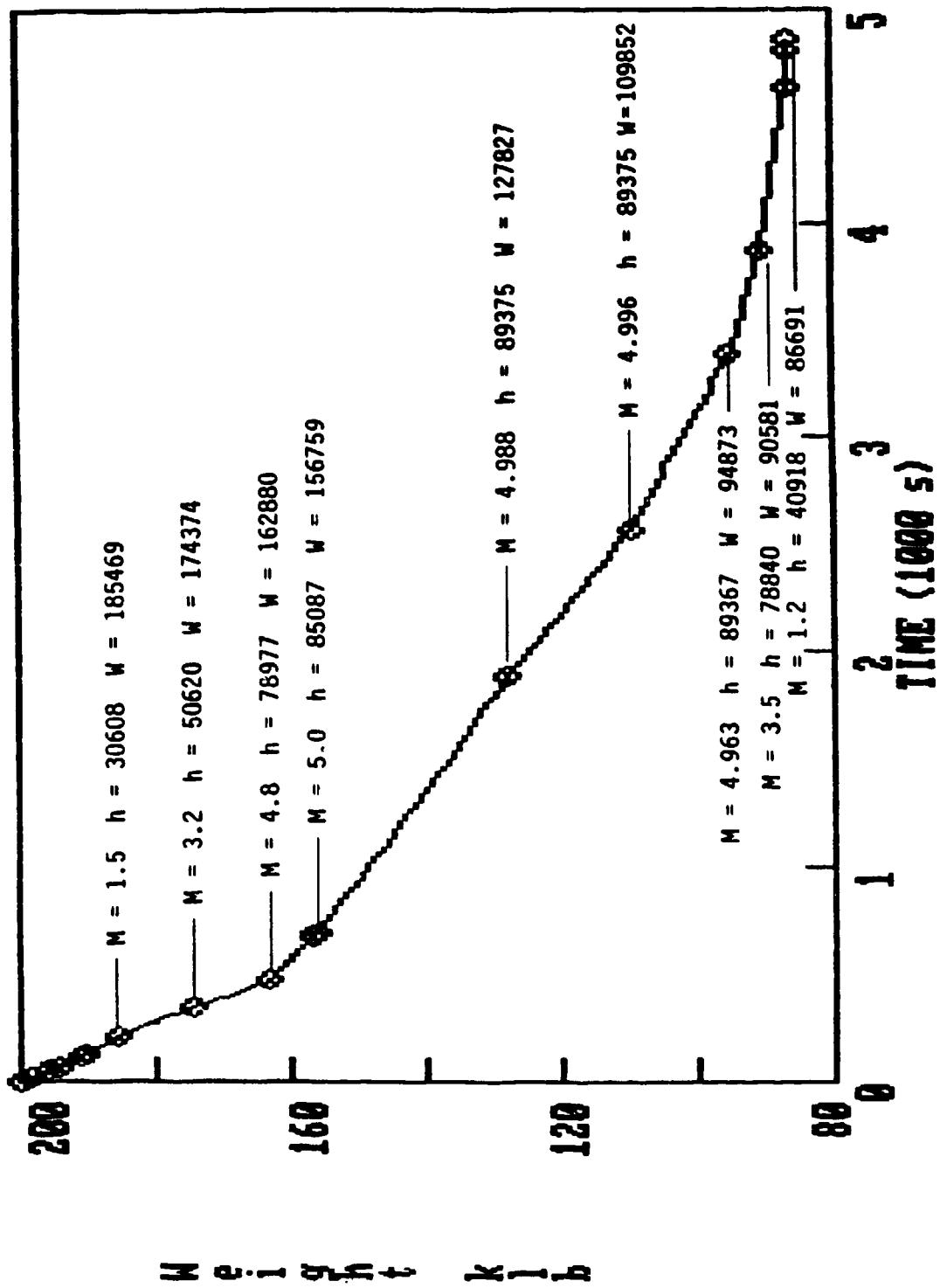


FIGURE A3. TYPICAL HYPERSONIC INTERCEPTOR ( $M_\infty = 5$ , MCH FUEL) VEHICLE WEIGHT HISTORY (FUEL EXPENDITURE)

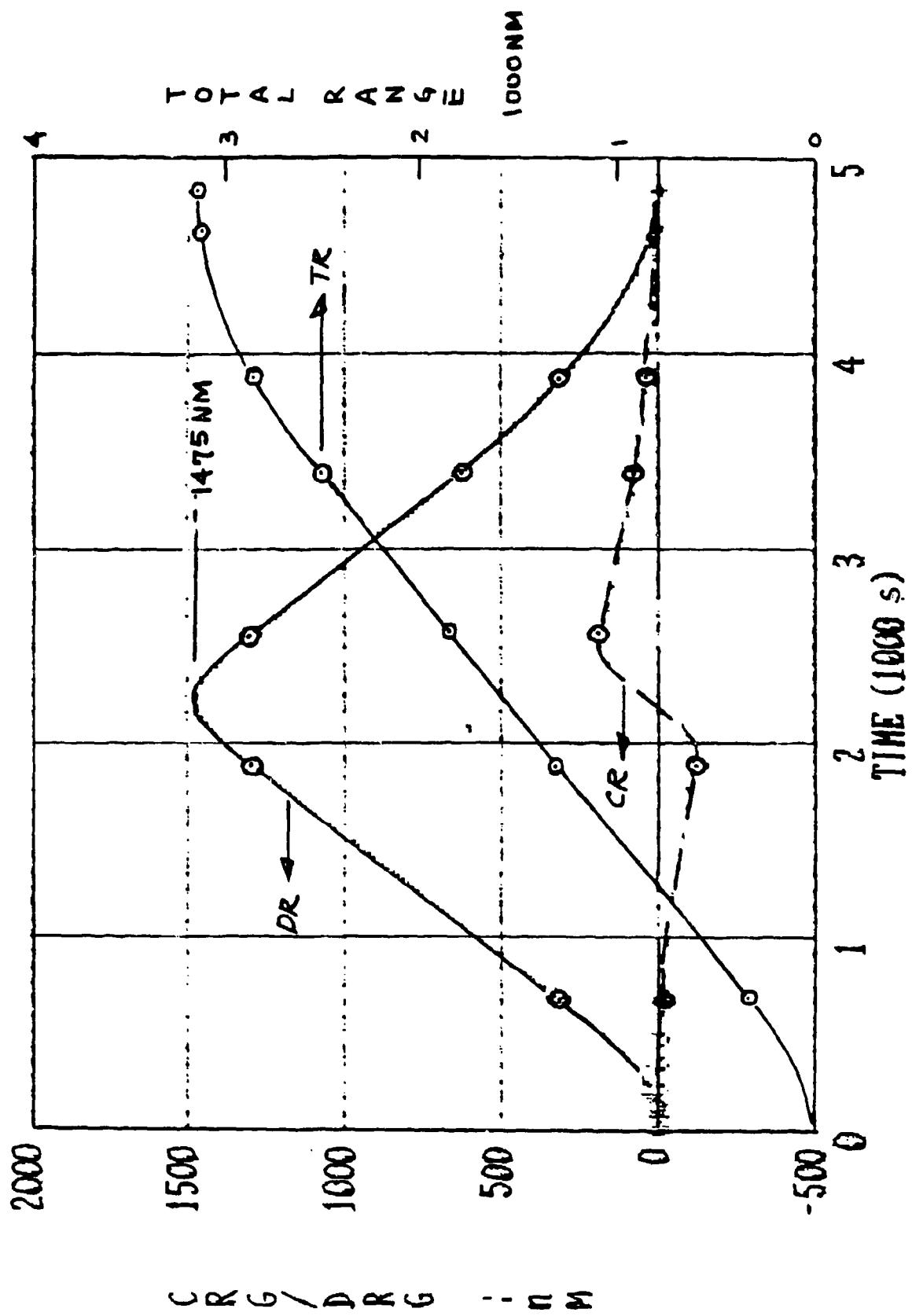


FIGURE A4. TYPICAL HYPERSONIC INTERCEPTOR ( $M_\infty = 5$ , MCH FUEL) RANGE HISTORIES; DR - DOWN RANGE,  
 CR - CROSS RANGE, TR - TOTAL RANGE.

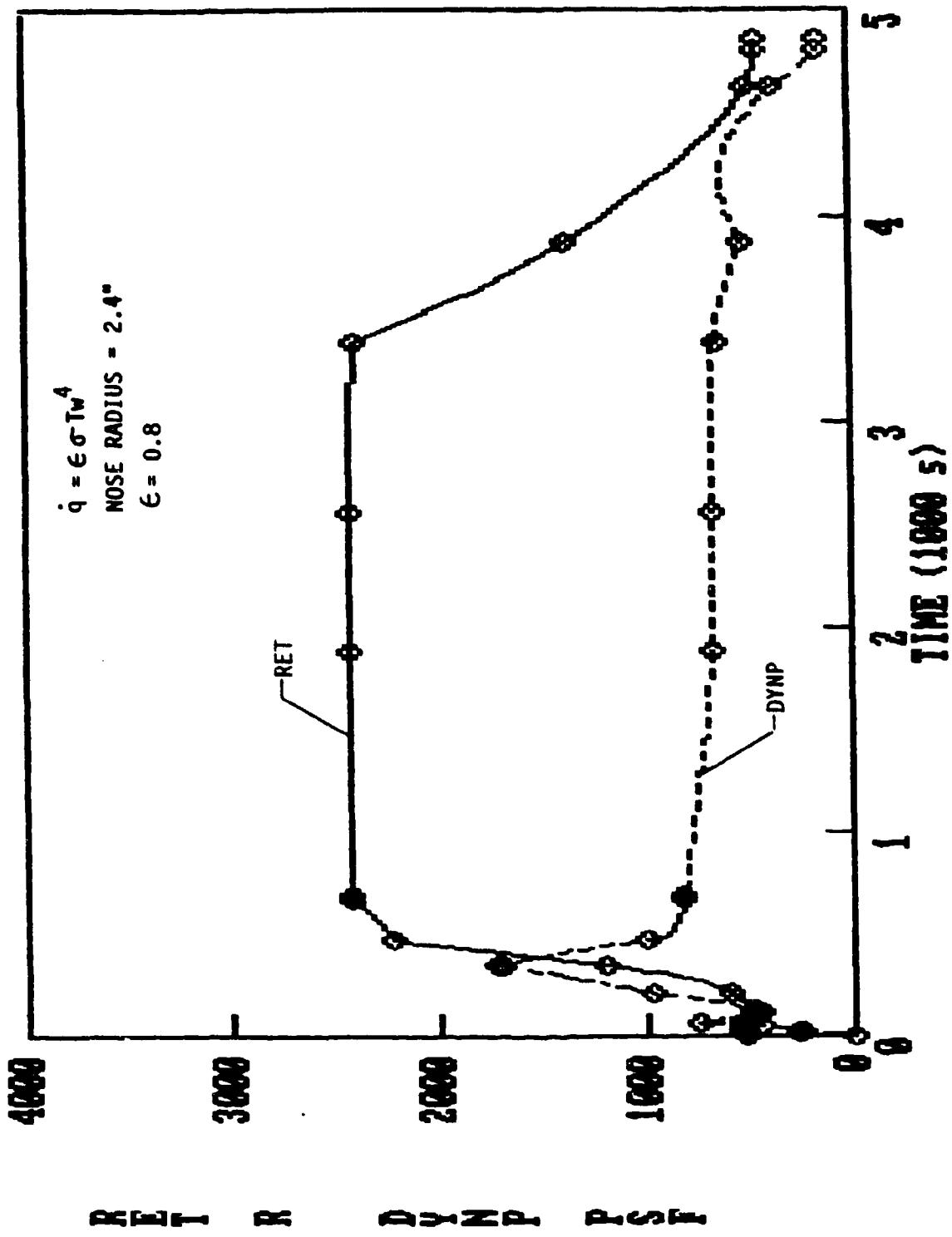


FIGURE A5. TYPICAL HYPERSONIC INTERCEPTOR ( $M_\infty = 5$ , MCH FUEL) RADIATION EQUILIBRIUM TEMPERATURE AND DYNAMIC PRESSURE HISTORIES

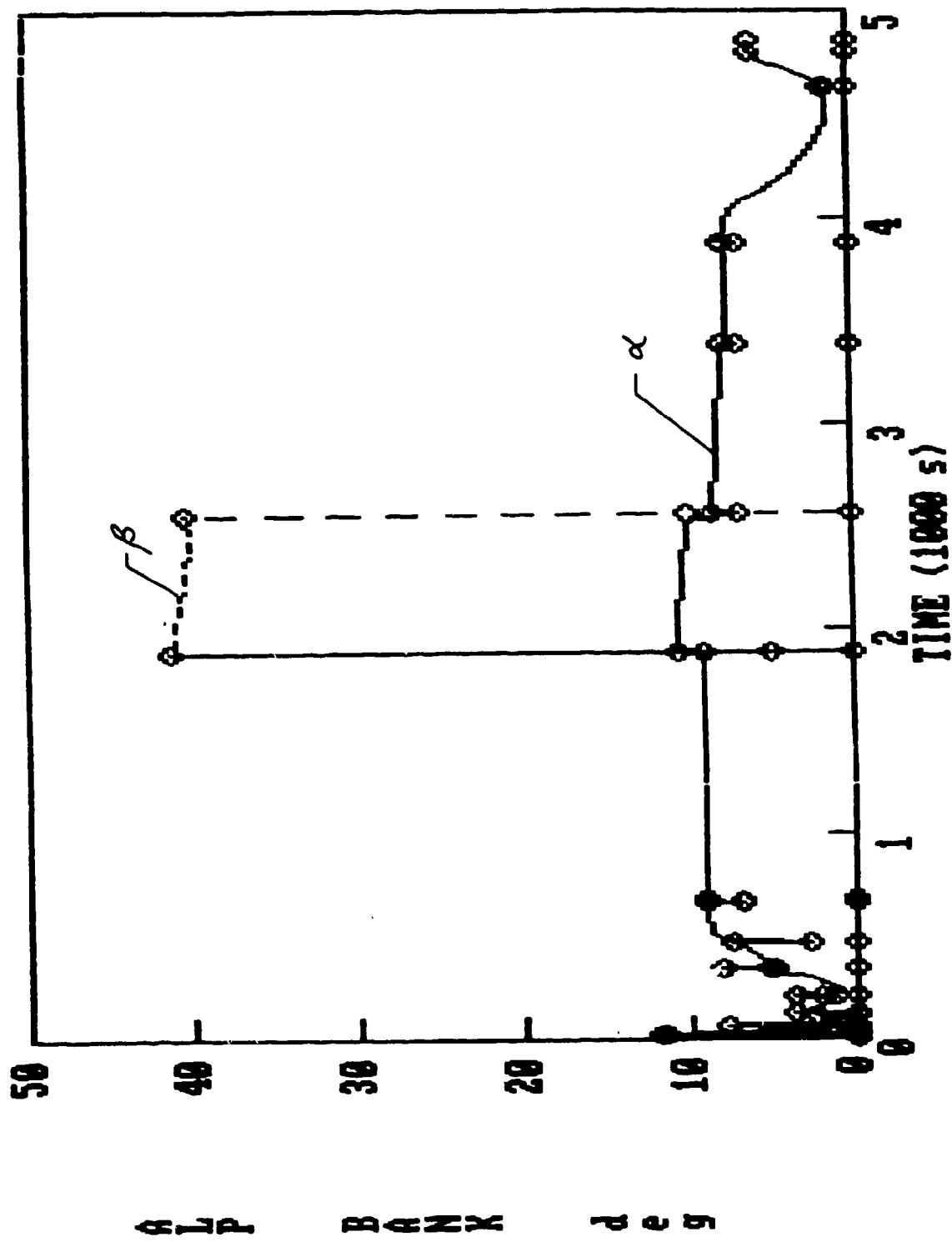


FIGURE A6. TYPICAL HYPERSONIC INTERCEPTOR ( $M_\infty = 5$ , MACH FUEL) ANGLE OF ATTACK AND BANK ANGLE HISTORIES

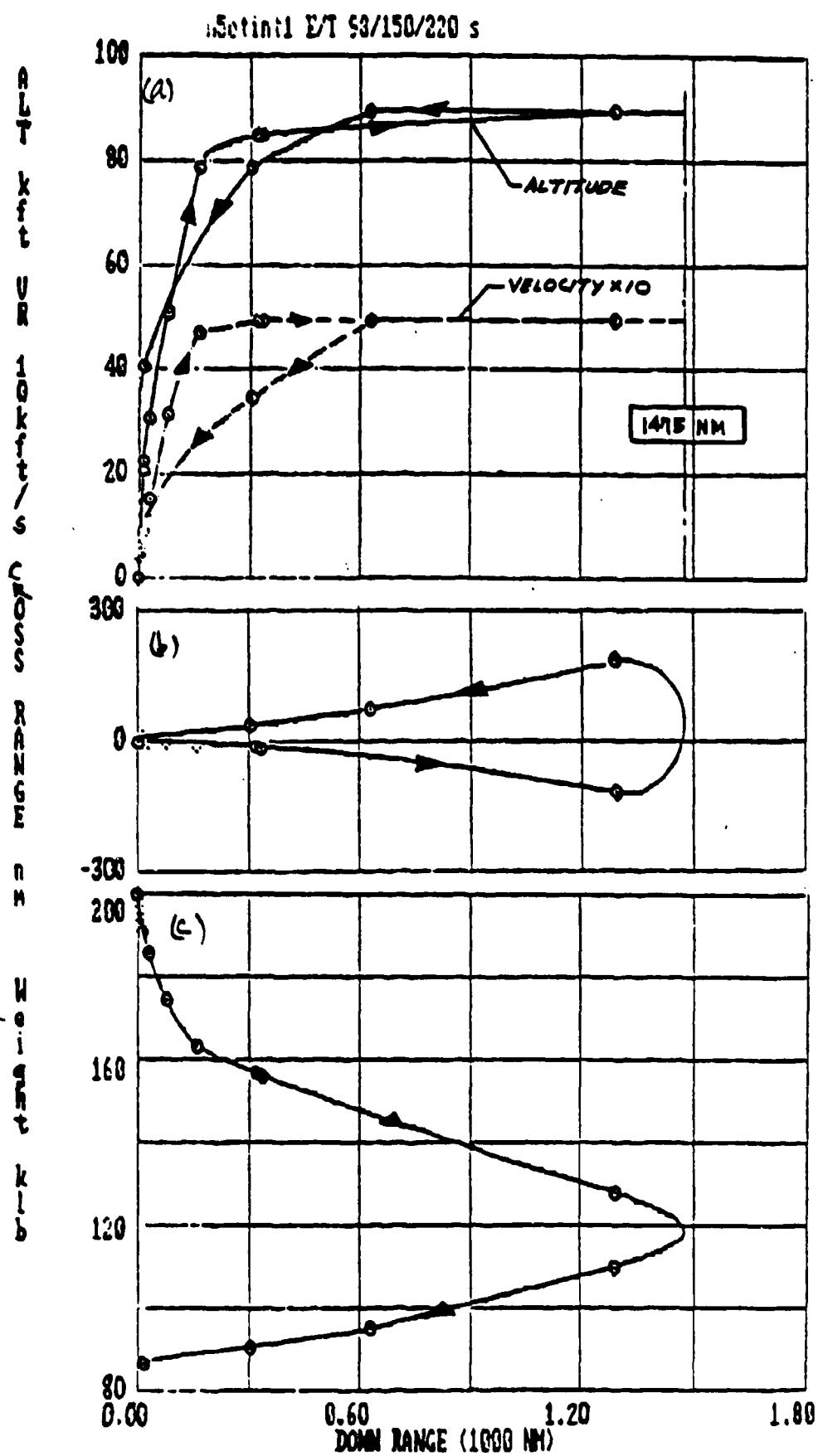


FIGURE A7. HYPERSONIC INTERCEPTOR ( $M_{\infty} = 5$ , MCH FUEL) MISSION PROFILE  
 (a) ALTITUDE, VELOCITY, (b) CROSS RANGE, (c) WEIGHT VS. DOWN RANGE.

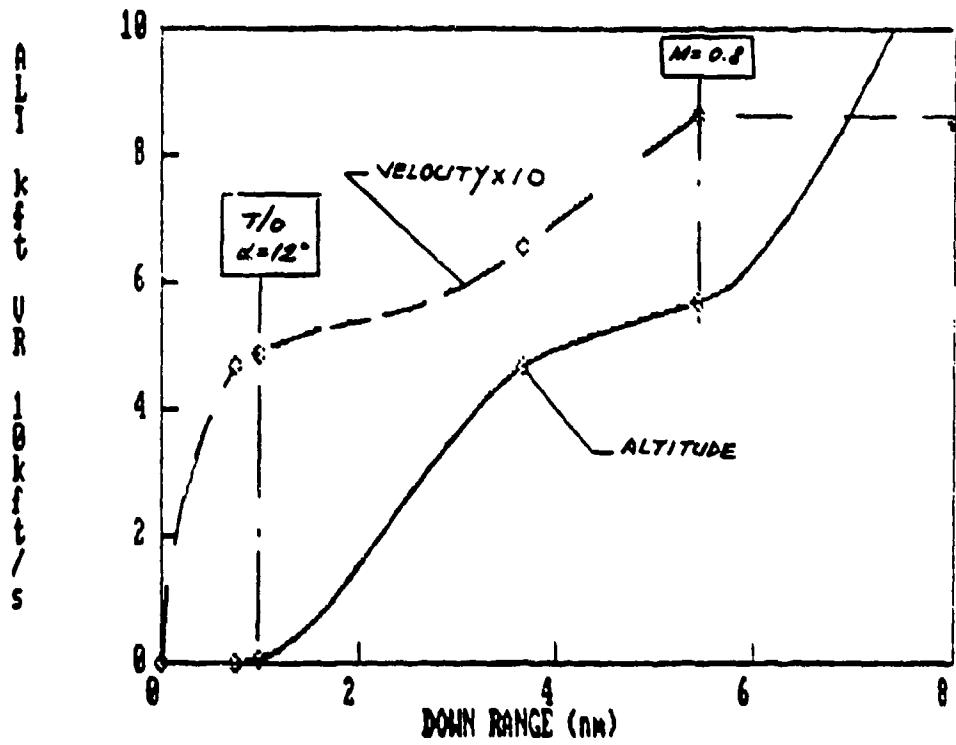
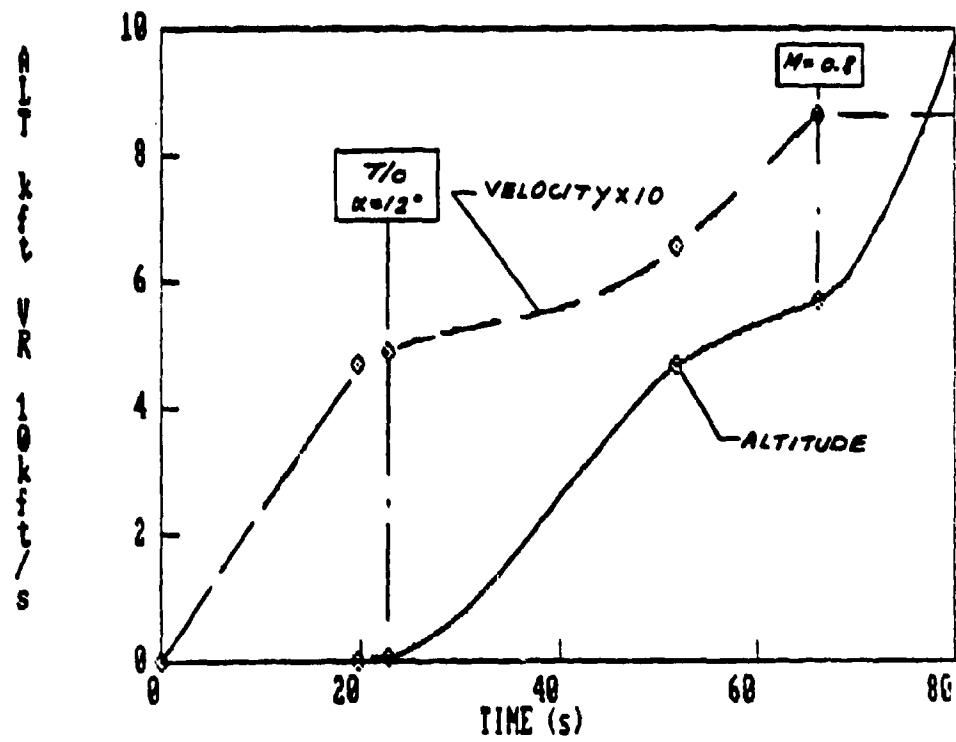


FIGURE A8. TYPICAL HYPERSONIC INTERCEPTOR TAKEOFF PERFORMANCE

- (a) ALTITUDE, VELOCITY HISTORIES
- (b) ALTITUDE, VELOCITY VS. DOWN RANGE

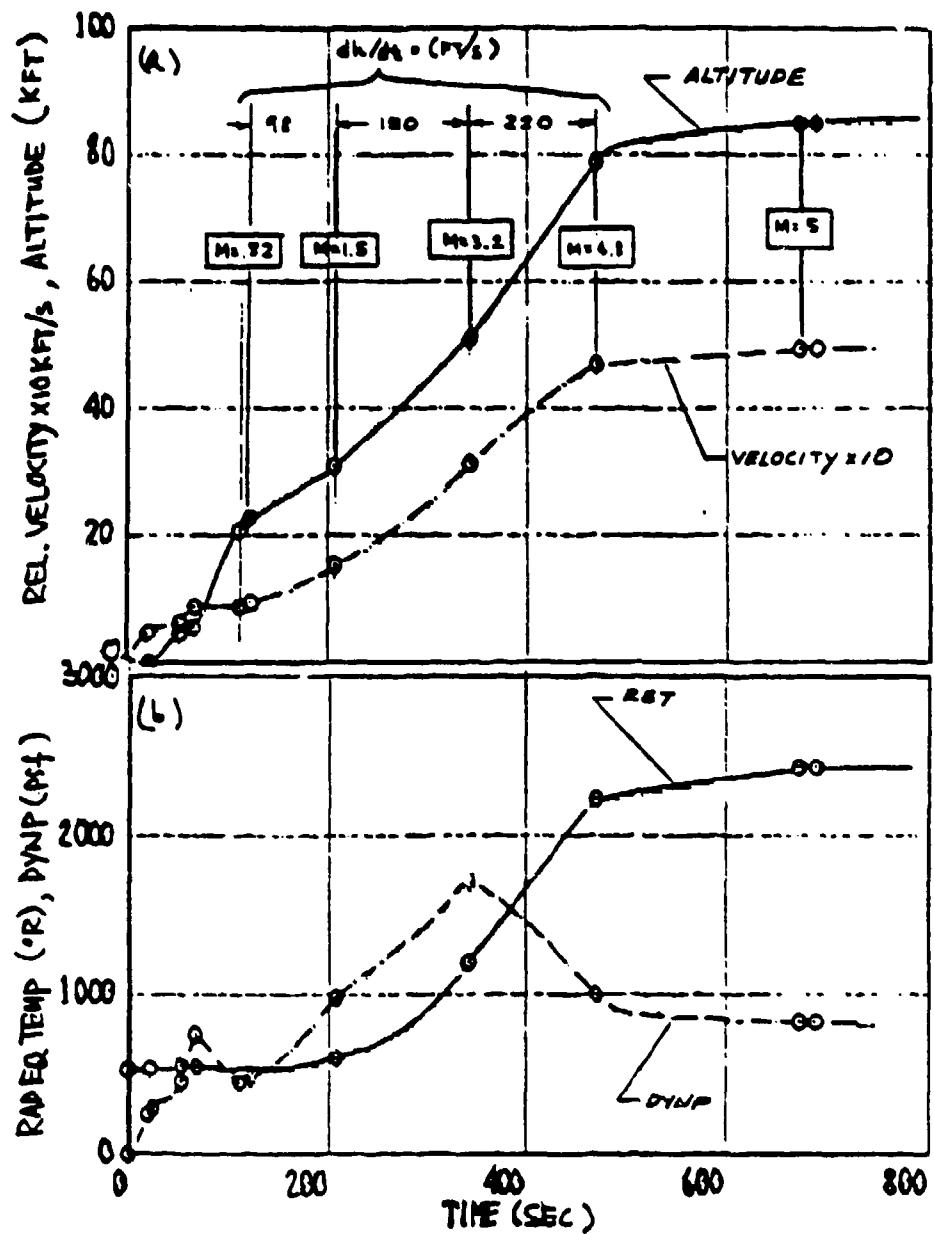


FIGURE A9. TYPICAL HYPERSONIC INTERCEPTOR ( $M_{\infty} = 5$ , MCH FUEL) MISSION PROFILE DURING ACCELERATION/CLIMB PHASE.

- (a) ALTITUDE, RELATIVE VELOCITY HISTORIES
- (b) RADIATION EQUILIBRIUM TEMPERATURE, DYNAMIC PRESSURE HISTORIES

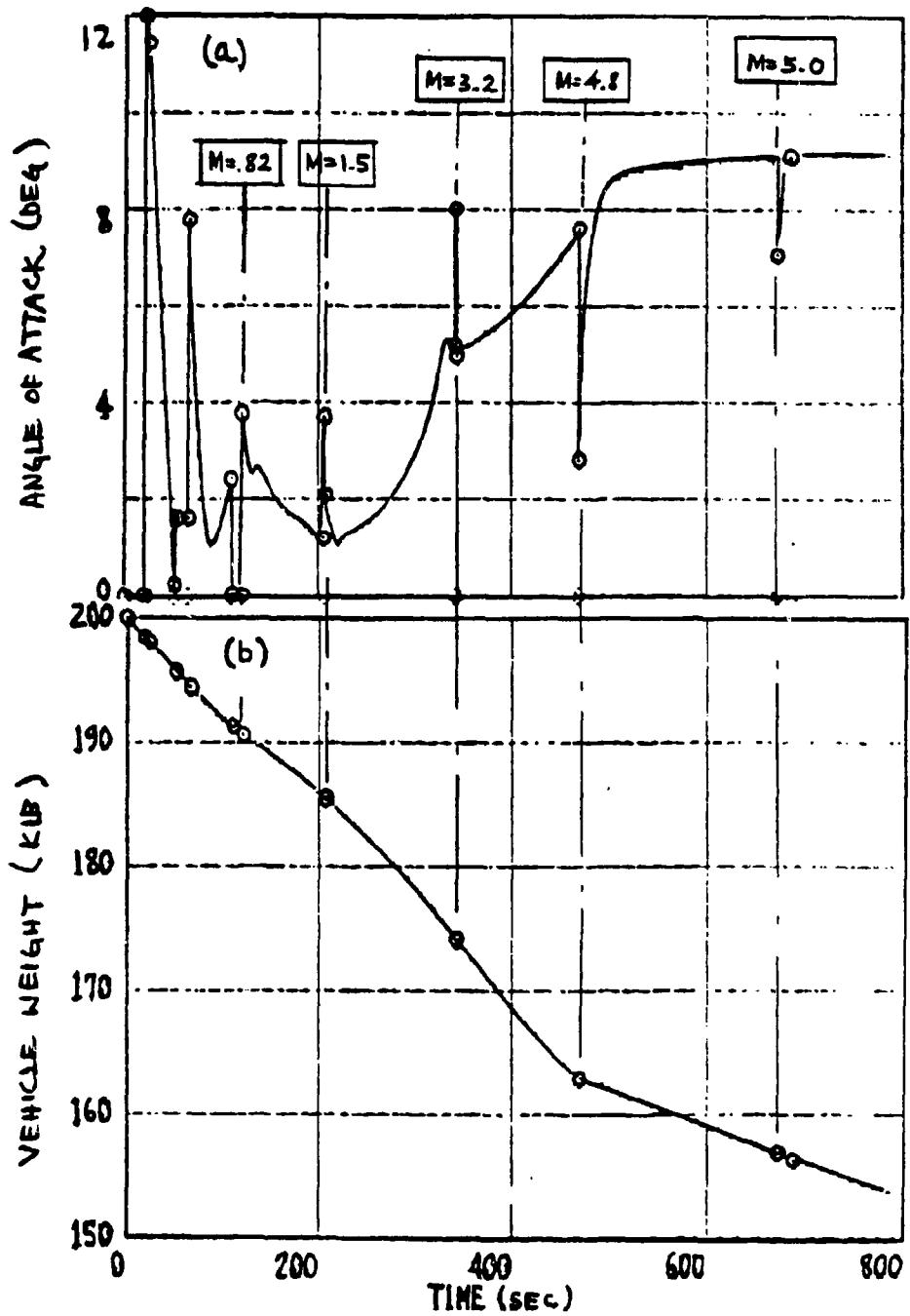


FIGURE A10. TYPICAL HYPERSONIC INTERCEPTOR ( $M_{\infty} = 5$ , MCH FUEL) PROFILE DURING ACCELERATION/CLIMB PHASE

(a) ANGLE OF ATTACK HISTORIES

(b) VEHICLE WEIGHT (FUEL EXPENDITURE) HISTORIES

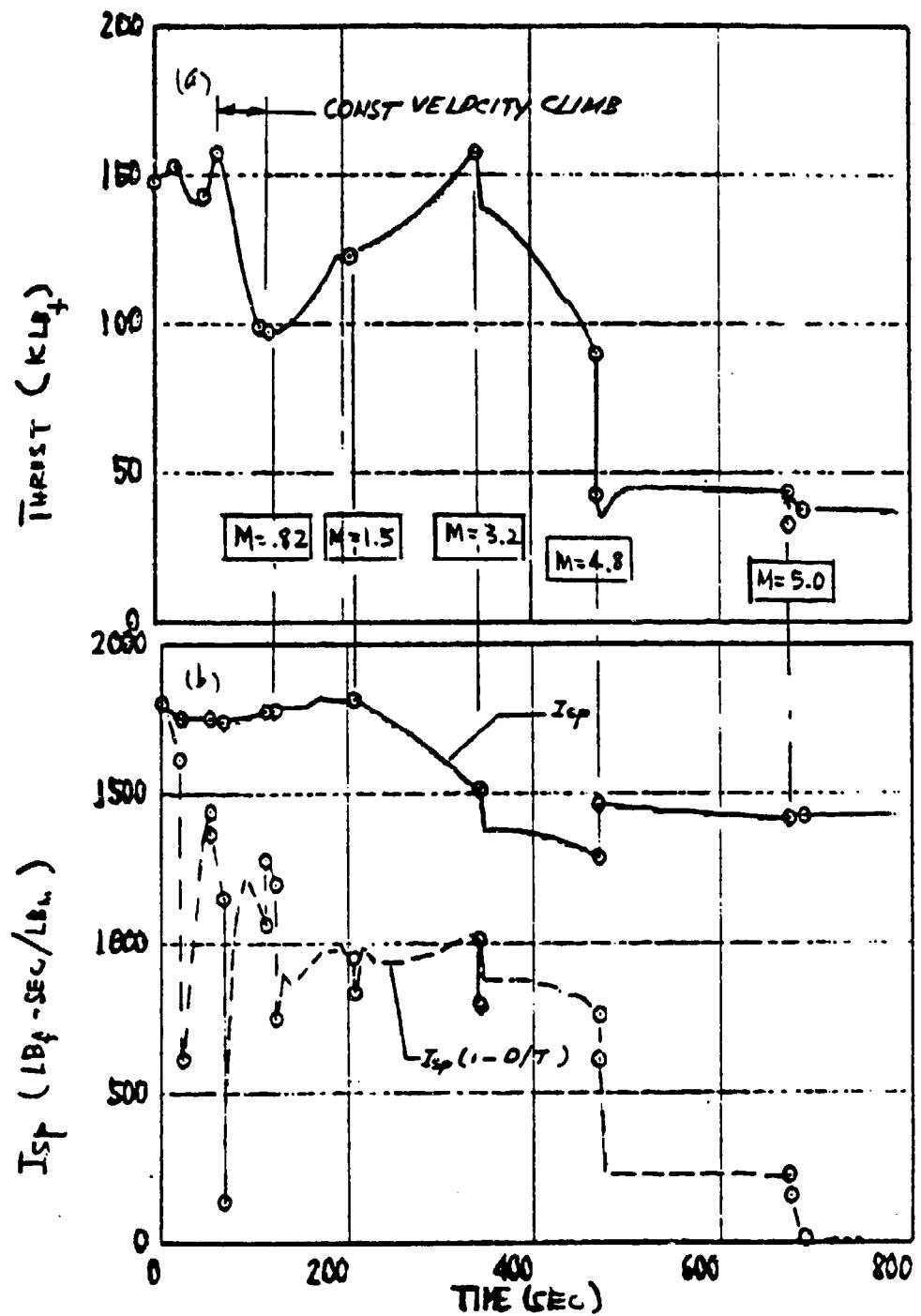
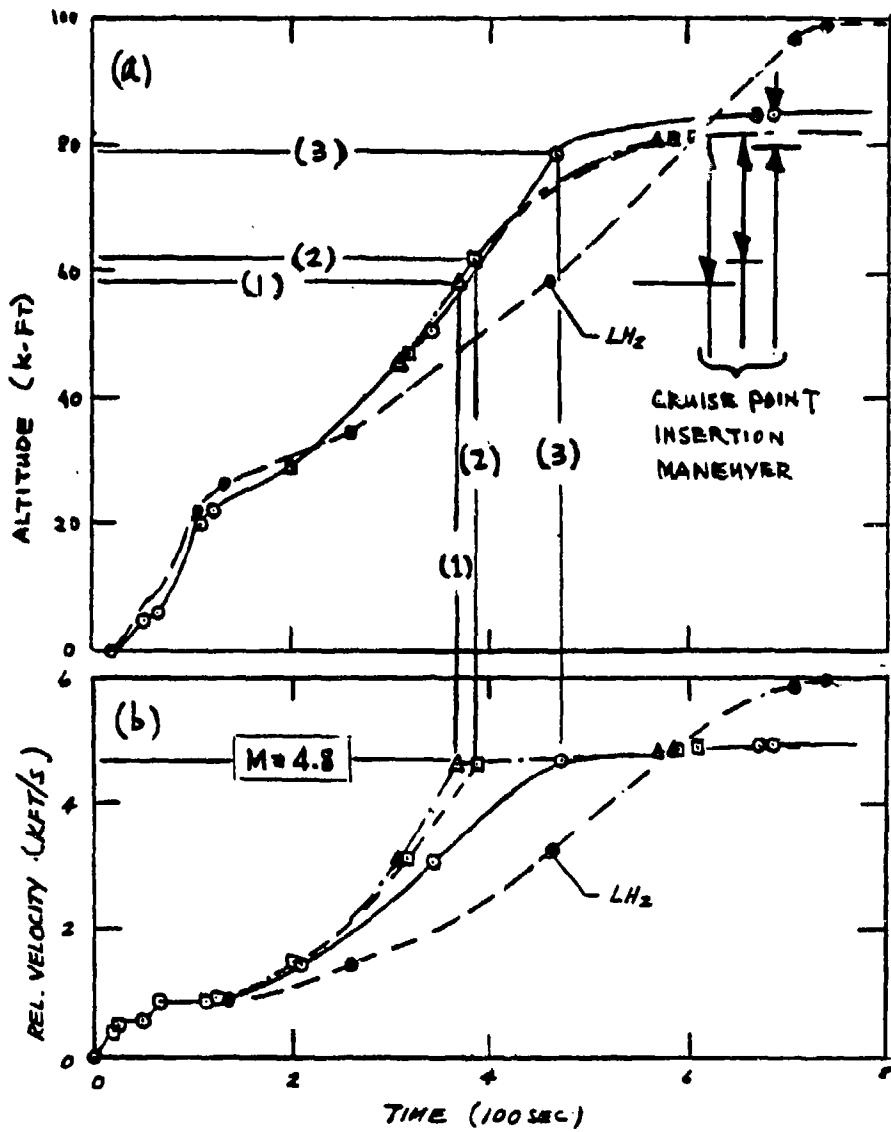


FIGURE A11. TYPICAL HYPERSONIC INTERCEPTOR ( $M_{\infty} = 5$ , MCH FUEL) PROPULSION PROFILE DURING ACCELERATION/CLIMB

(a) THRUST HISTORY

(b) ENGINE AND SYSTEM EFFECTIVE SPECIFIC IMPULSE HISTORIES



$\Delta$  (1)  $dh/dt = 85, 150, 220 \text{ ft/s}$   
 $\square$  (2)  $dh/dt = 90, 150, 220 \text{ ft/s}$   
 $\circ$  (3)  $dh/dt = 98, 150, 220 \text{ ft/s}$

$\left. \right\} MCH$

FIGURE A12. COMPARISON OF FLIGHT PROFILES DURING THE ACCELERATION/CLIMB PHASE AS FUNCTION OF A CLIMB RATE VARIATION BETWEEN  $0.82 \leq M \leq 1.5$ .

(a) ALTITUDE HISTORY  
 (b) RELATIVE VELOCITY HISTORY

OPENED SYMBOLS: MCH (ENDOTHERMIC) FUEL - MAXIMUM  $M_\infty = 5.0$   
 CLOSED SYMBOLS: LH<sub>2</sub> FUEL - MAXIMUM  $M_\infty = 6.0$

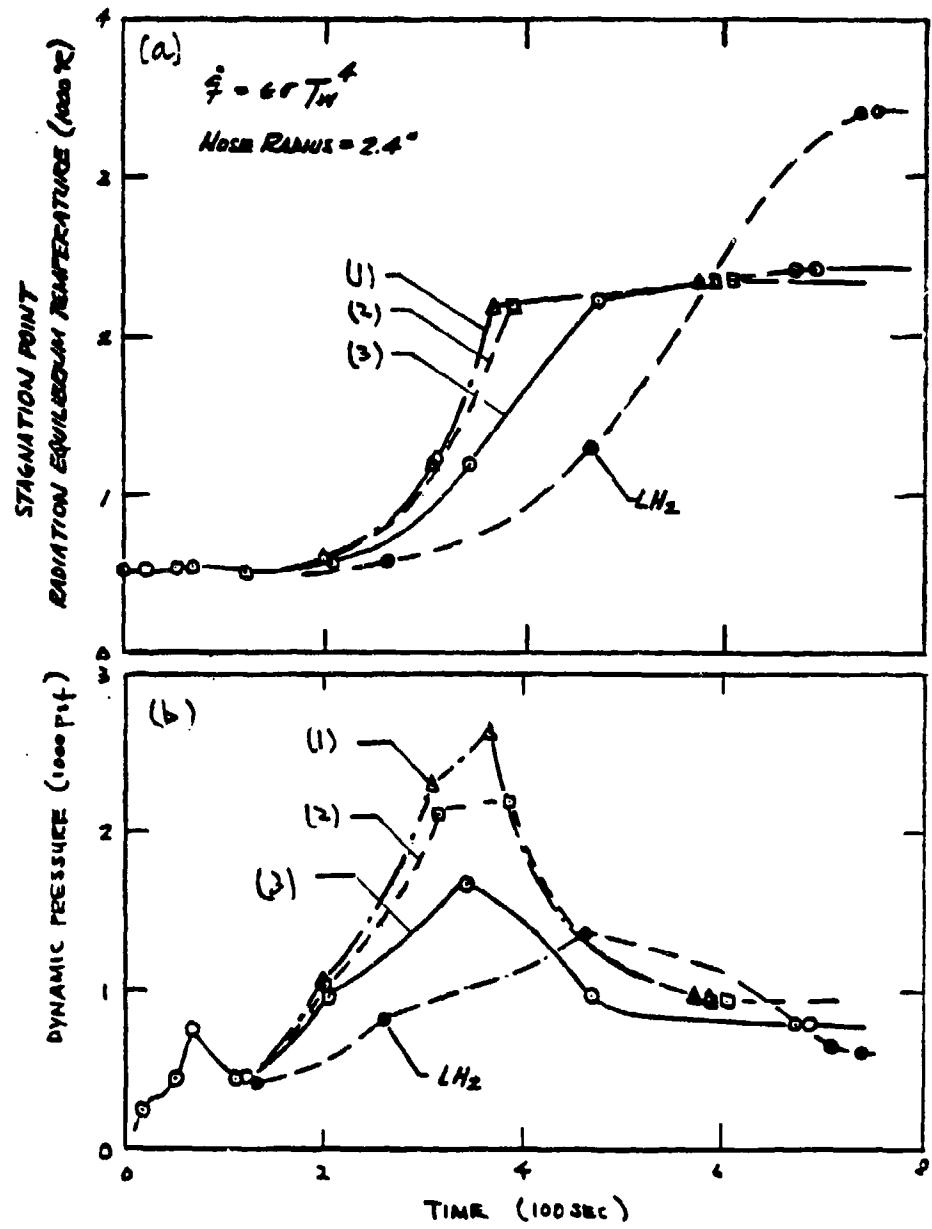


FIGURE A13. COMPARISON OF FLIGHT PROFILES DURING THE ACCELERATION/CLIMB PHASE AS FUNCTION OF A CLIMB RATE VARIATION BETWEEN  $0.825 \leq M \leq 1.5$ .

(c) STAGNATION POINT RADIATION EQUILIBRIUM TEMPERATURE HISTORY  
 (d) DYNAMIC PRESSURE HISTORY

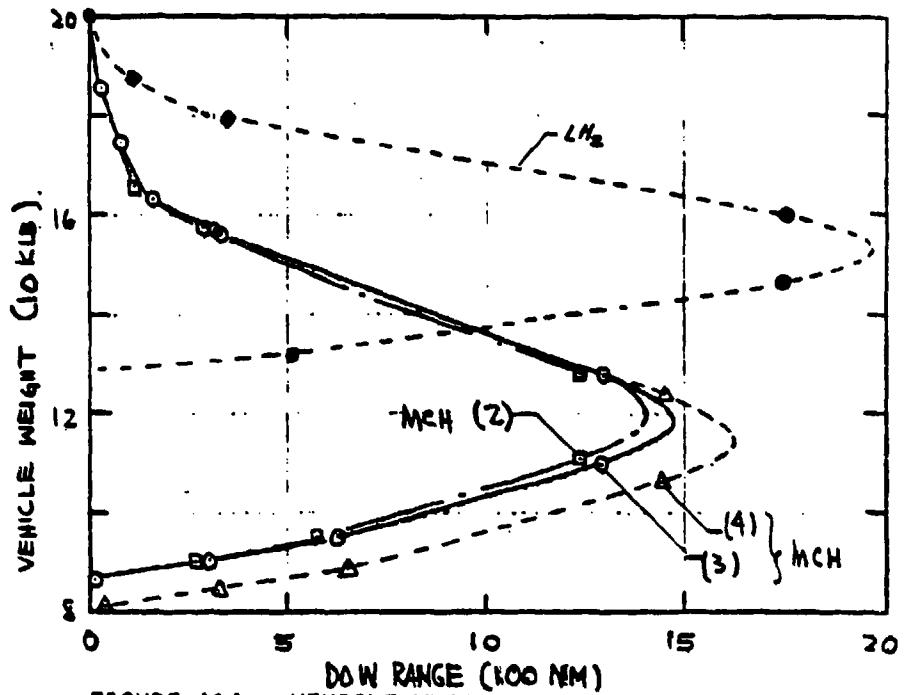


FIGURE A14. VEHICLE WEIGHT VS. DOWN RANGE COMPARISON FOR MCH (ENDOTHERMIC) &  $LH_2$  FUEL ENGINE VEHICLES.

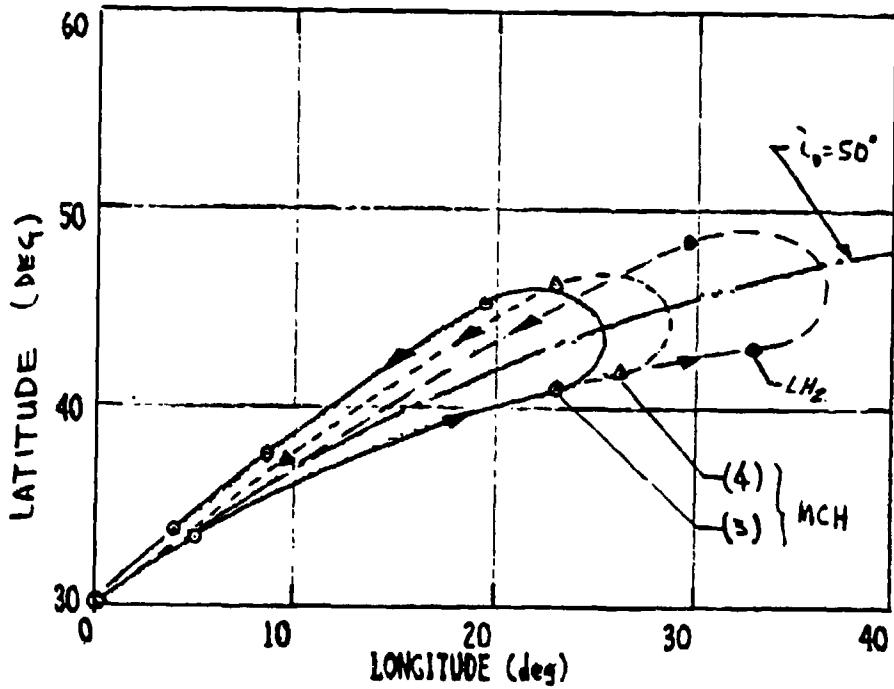


FIGURE A15. HYPERSONIC INTERCEPTOR GROUND TRACK COMPARISON FOR MCH (ENDOTHERMIC) &  $LH_2$  FUEL ENGINE VEHICLES.

APPENDIX B  
FAILURE TERM DEFINITION

Fault Tolerance

A system which is able to continue to provide critical functions after the occurrence of a fault.

Fail Operational

The capability of a system for continued operation without degradation following a single failure, and to fail passive in the event of a related subsequent failure.

Dual Fail Operational

A system that will continue to operate with no degradation in performance after both the first and second failures.

Fail Passive

The capability of a system to automatically disconnect and to revert to a passive state following a failure. Allowable failure transients or out of trim condition in a flight critical system shall result in no significant steady state deviation from the vehicle flight path which could impair safe flight.

### Fail-Safe

The capability of a flight critical system to revert to a safe state or degraded mode of operation following an automatic channel(s) disconnect in the event of failure or pilot initiated disconnect. Safe state may be achieved by authority limiting and positive removal of actuation motive power. The allowable authority limits need to be established to provide the desired performance objectives and in consideration of structural design limits and safe recovery characteristics.

### Fail-Soft

A system that does not cause an unsafe condition after a failure. Pilot corrective action may be required within, for example, six seconds. The appropriate redundancy is provided at the system, subsystem and component levels to meet the mission reliability and fault-tolerance requirements. The VMS architecture provides global reconfiguration modes and commands as a function of flight phases and failures within the VMS. The VMS concept provides aircraft-wide prioritized resource sharing of expensive elements, namely sensors and processors. These items are expensive in terms of actual cost, recurring maintenance costs, and increased aircraft weight.



## Defense Threat Reduction Agency

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TDANP-TRC

August 1, 2001

MEMORANDUM TO DEFENSE TECHNICAL INFORMATION CENTER  
ATTN: OCQ/MR LARRY DOWNING

SUBJECT: DOCUMENT CHANGES

The Defense Threat Reduction Agency Security Office reviewed the following documents in accordance with the Deputy Secretary of Defense Memorandum entitled, "Department of Defense Initiatives on Persian Gulf War Veterans' Illnesses" dated 22 March 1995, and determined that the documents were unclassified and cleared for public release:

DNA-TR-93-84, AD-B244408, Acoustic Resonance Spectroscopy in CW Verification Tooele Field Trial (August 1992).  
DNA-TR-93-129-V1, AD-B192045, Global Proliferation – Dynamics, Acquisition Strategies and Responses, Volume 1 – Overview.  
DNA-TR-93-129-V2, AD-B192046, Global Proliferation – Dynamics, Acquisition Strategies and Responses, Volume 2 – Nuclear Proliferation.  
DNA-TR-91-216, AD-B163637, Harmonizing the Chemical Weapons Convention with the United States Constitution.  
DNA-TR-92-180, AD-B175230, Evaluation of the Concept of a List for the BWC.  
DNA-TR-92-61, AD-B167663, Basic State Party Functions and Skills Under CWC.  
DNA-TR-92-66, AD-B167357, Domestic Reporting Requirements for Chemical Industry.  
DNA-TR-91-213, AD-B163260, Analysis of the Interactions Between Treaties.  
DNA-TR-93-70, AD-B177262, Chemical Weapons Convention Inspections of Private Facilities Application of United States Environmental and Safety Laws.  
DNA-TR-92-182, AD-B173450, Commercial Products from Demilitarization Operations.  
DNA-TR-91-217-V3, AD-B169350, Chemical Weapons Process Parameters, Volume 3 – Users' Guide.  
DNA-TR-92-116-SUP, AD-B175292, Technical Ramifications of Inclusion of Toxins in the Chemical Weapons Convention (CWC), Supplement.  
DNA-TR-92-128, AD-B175452, Task 1 Report Target Vapor Identification and Database Development.  
DNA-TR-92-196, AD-B174940, Task 2 Report Algorithm Development and Performance Analysis.  
DNA-TR-93-68, AD-B178109, CW Detection Instrument R&D Design Evaluation.

Enclosed is a copy of the referenced memorandum. If you have any questions, please call me at 703-325-1034.

*Ardith Jarrett*  
ARDITH JARRETT  
Chief, Technical Resource Center